RELATIONSHIP BETWEEN SATISFACTION WITH HOUSING AND QUALITY OF LIFE

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CHAPTER I

INTRODUCTION

Previous research on the quality of life has dealt with that concept as a single variable, rather than as a combination of many life aspects. The studies that followed this mode of investigation utilized mental health as the independent variable to explain satisfaction with quality of life (Gurin, Veroff, and Feld, 1969; Bradburn, 1965; and Cantril, 1965). Overall quality of life was usually measured by one question that asked respondents to rate their quality of life on a five to seven point scale.

In 1974, Andrews was the first to examine the concept of quality of life as a combination of many aspects of an individual's life rather than one aspect. In 1976, Campbell, Converse, and Rodgers pursued the study of quality of life from the same perspective. The studies examined the relationships among satisfaction with a number of specific "life domains" and overall life satisfaction. The researchers analyzed the contribution of each life domain satisfaction variable to overall life satisfaction. Selection of the life domains used in the studies was based on past research that investigated areas people felt were significant to their life. Campbell et al. (1976) stated the need for replication of the research to increase the validity of their particular theoretical approach to quality of life. Replications of studies can also serve as monitors of consistency or

change in people's perceptions of determinants of overall qualify of life.

Statement of Problem

The study proposed here includes two dimensions: (1) the relative importance of satisfaction with various life domains in explaining overall satisfaction with quality of life, and (2) an in-depth analysis of factors related to housing satisfaction. The first dimension is similar to the studies by Andrews (1974) and Campbell et al. (1976) in that overall satisfaction with life is viewed as a combination of various components of a person's life. It differs from the Campbell study in that it analyzes a sample from only one state (Oklahoma) rather than a national sample.

The second dimension of this study will more closely analyze the factors that are related to housing satisfaction. Previous studies have examined housing satisfaction in a similar fashion (Campbell et al., 1976; Reardon and Boles, 1978; Rogers and Nikkel, 1979; Stewart and McCown, 1977; Speare, 1974; Rainwater, 1966; Fried and Gleicher, 1961). However, these studies have identified housing satisfaction as the dependent variable. This study examines housing satisfaction not only as a dependent variable, but as an independent variable that ultimately influences satisfaction with overall quality of life.

This study further examines the relationships between overall satisfaction with quality of life and satisfactions with various life domains. This analysis will aid in further clarifying the concept of quality of life and eliminating some of the uncertainty surrounding the definition of the concept.

This study will aid professionals, particularly home economists, whose focus is improving the quality of family and individual lives. The results will identify specific domains of peoples' lives that are most strongly related to overall satisfaction with quality of life. This identification of important life domains will enable the home economist to develop specific programs which would enhance those specific aspects.

The characteristics found to be influential in housing satisfaction will aid professionals concerned with housing and urban planning. Housing specialists, the building industry, and urban planners will have a clarified concept of the factors which contribute to an individual's perception of components of housing satisfaction. These characteristics could then be integrated into the construction, design, and planning of existing structures and communities.

Purpose of Study

The purpose of the study was to examine the relative contribution of satisfaction with 13 life domains to overall satisfaction with quality of life. An additional purpose was to examine the specific domain of housing, to identify the socio-demographic characteristics of the respondents and the characteristics of their housing that were related to housing satisfaction.

Objectives of Study

The objectives of the study were twofold: first, to analyze the relationship between 13 different measures of life satisfactions and overall satisfaction with quality of life. These 13 life

satisfaction measures are: (1) standard of living, (2) savings and investments, (3) friendships, (4) family life, (5) neighborhood, (6) location of residence, (7) housing, (8) life in Oklahoma, (9) life in the United States, (10) occupation, (11) spare time, (12) health, and (13) value of education.

The second objective of the study was to analyze the relationship between housing satisfaction and (1) socio-demographic characteristics (age, sex, race, income, marital status, employment, and education), and (2) housing characteristics (structural quality, person-per-room ratio, tenure, age of structure, length of residency, structure type, and housing cost).

Hypotheses

The following hypotheses were examined:

1. Overall satisfaction with quality of life is related to satisfaction with various life domains.

2. Housing satisfaction is related to socio-demographic characteristics of respondents and their housing characteristics.

Definitions of Major Variables

1. Overall Satisfaction with Quality of Life: This was measured by developing a composite score of a series of eight bipolar adjectives (boring-interesting; useless-worthwhile; friendly-lonely; full-empty; discouraging-hopeful; disappointing-rewarding; enjoyable-miserable; and brings out the best in me-doesn't give me much chance), measured on a seven point continuum, and one seven point Likert scale

2. Housing Satisfaction: Measured by one question structured in a seven point Likert scale assessing the degree of satisfaction or dissatisfaction with present housing (7 = complete satisfaction, 4 = neutral, 1 = complete dissatisfaction).

3. Neighborhood Satisfaction: Measured by one question structured in a seven point Likert scale assessing the degree of satisfaction or dissatisfaction with the neighborhood as a place to live (7 = complete satisfaction, 4 = neutral, 1 = complete dissatisfaction).

4. Socio-Demographic Characteristics of Respondents: Age, sex, and race of respondent; level of education completed (number of years); employment status (working, not working, unemployed, homemaker, student), total annual family income before taxes; marital status (married, living together, widowed, divorced, separated, never married).

5. Housing Characteristics: Person-per-room ratio; tenure (owner or non owner); type of structure (mobile home, detached single family house, apartment, duplex); housing cost (very low, low, average, high, very high); age of dwelling (less than 5, 5-25 years, more than 25); length of residency; structural quality (very well kept; mixed, could use paint; poor, needs painting and minor repairs; very poor, dilapidated). The questions, as they appeared in the interview schedule, are shown in Appendix A.

Assumptions

For this research it was assumed that:

1. Individuals can think in the context of overall life satisfaction.

2. A subjective response to a life domain is related to specific objective characteristics of that domain.

3. The sample is representative of the population from which it was drawn. Two additional assumptions are an integral part of the statistical analysis utilized:

   a. The independent variables are acting simultaneously on the dependent variable.

   b. A linear relationship exists between the independent and dependent variables.

Limitations

The following is a listing of acknowledged limitations of this study:

1. The respondents were given the opportunity to respond only to the domains identified in the instrument. No open-ended questions were included to give respondents an opportunity to include other domains or aspects of their lives that contributed to overall life satisfaction. Also open-ended questions could have been utilized in identifying other objective characteristics which contributed to satisfaction with a particular domain.

2. The housing section of the instrument was limited in the following areas:

   a. The only measure of housing quality was the interviewer's perception of the house. No objective criteria of quality were employed. Respondents were not asked to give perceived quality of their homes.

b. Previous research has used the achievement of social and family norms or standards as a measurement of housatisfaction (Morris, Crull, and Winter, 1976). Questions which assessed the family's desired housing in relation to present housing would have provided the opportunity to analyze housing satisfaction in relation to norms and perhaps further explain housing satisfaction.

c. Previous research has found that there is a social-psychological dimension to housing satisfaction (Cooper, 1974; Laumann and House, 1972; Goffman, 1959). Results have indicated that an individual's house is a setting/stage for social performances, and a symbol of the individual's personality. The adequacy of the house as a reflection of personality and a stage for a successful social performance is thought to be an integral part of housing satisfaction. No social/psychological perspective was utilized in this study.

3. The regression analysis gives insight into the stregnth and direction (positive or negative) of the contributions of housing characteristics to the explanation of variance in housing satisfaction. The elaboration of why these variables are significant cannot be explained from the available data. Elaboration is more appropriate for a qualitative type study where observation is the dominant method of data collection.

CHAPTER II

REVIEW OF LITERATURE AND THEORETICAL BACKGROUND

Overall Satisfaction With Quality of Life

Previous research has investigated overall satisfaction with quality of life by purely objective measures. The researchers identified specific components of a person's life and then evaluated overall quality of life in terms of the presence or absence of these selected components. Usually these studies utilized very small samples, making it difficult to project the results to a larger population, adding further to the overall limitations.

In 1965, Bradburn investigated the concept of quality of life by means of mental health measures. Brandburn's study was one of the first quality of life studies to utilize a large representative sample. Bradburn's independent variables were an individual's positive and negative attitudes. Bradburn's concept of life satisfaction was based on "emotional balance" rather than what an individual desires or needs.

In 1965, Cantril investigated the quality of life of individuals in 13 different countries, including the United States. Cantril developed his own research instrument that asked the respondents to imagine the "worst life" and the "best life" and then determine where their lives were at the present time, given the two extreme situations. Interviewers encouraged the respondents to express the positive and

negative attitudes regarding future life events, specifically centering on the respondents' futuristic hopes and fears.

Another study that investigated the concept of quality of life was conducted in 1969 by Gurin, Veroff, and Feld. The purpose of that research was to determine an individual's quality of life by measuring mental health. Several psychological measures were utilized. Respondents were asked if they had ever experienced any breakdowns or had any psychological counseling. A respondent's quality of life was then based on the presence or absence of certain psychologically based criteria. Overall satisfaction with life was based on one question which asked the respondents to indicate how happy they were (very happy, pretty happy, or not too happy).

In 1974, Andrews began investigating quality of life in a manner that contrasted with any previous research on life quality (i.e., Gurin et al., 1969; Cantril, 1965; Bradburn, 1965). Previous research treated life quality as a single aspect of a person's life, but Andrews thought it to be a combination of many aspects or measures.

Andrews (1974) conducted his investigation to develop a measure of perceived life quality. The basic conceptual model was that an individual's life quality was dependent on specific life domains (or life components) and how the individual evaluated or values these domains. It was believed that individuals have a certain set of values or expectations that are constantly used to evaluate certain aspects of their lives. After a person has evaluated a life domain according to his or her set of values, an integration process takes place resulting in a subjective response to the specific domains under investigation. The cumulative effects of the subjects'

response to the various life domains was thought to result in a measurement of overall quality of life. Andrews believed life quality was dependent upon several components or domains of a person's life.

The major purpose of the research by Andrews (1974) was to identify specific life domains. Identification of the domains was accomplished by four different methods. First, the author investigated previous research that identified people's concerns, worries, and fears (Cantril, 1965; Blumenthal, 1972; Survey Research Center, 1971; Bachman, Kahn, Mednick, Davidson, and Johnston, 1967; Lansing, Withey, and Wolfe, 1971; Aberbach and Walker, 1973). The majority of these research projects were conducted with samples of the entire United States. A second method was to conduct interviews with persons of different social and economic backgrounds, identifying components of daily routines. A third method was to compile lists of values previously identified by the following scholars: Rokreach (1973); White (19744); Allport and Vernon (1931); Morris and Jones (1955); Dodd (1951); Lepley (1957); and Kluckhorn (1953). The fourth and final method was to compile a list of social indicators that had been identified by government agencies (U.S. Department of Health, Education, and Welfare; U.S. Office of Management and Budget; Organization for Economic Cooperation and Development). The listing from all four sources resulted in an identification of 123 social indicators or values which were believed to be related to overall quality of life.

Cluster analysis and factor analysis were utilized to reduce the 123 indicators to a more manageable size. The results from the statistical analysis reduced the original 123 to 30 different items. Multiple classification analysis (a form of multiple regression) was

then utilized to determine how much of the variation in overall life satisfaction was explained by these 30 items. Results indicated that 55 percent of the variation in life satisfaction was explained, and that 12 of these items were actually explaining over half of the variance. The 12 domains were selected by the following criteria: (1) predictive power, (2) amount of dispersion in the multi-dimensional space, and (3) potential policy relevance. The 12 domains selected were (1) yourself, (2) family life, (3) money (4) amount of fun, (5) house/apartment, (6) activities with family, (7) time to do things, (8) spare time, (9) national government, (10) goods and services, (11) health, and (12) occupation (Andrews, 1974).

Further analysis was done to try to increase the explanatory power of the theoretical model. Socio-demographic characteristics of the respondents were first tested alone with overall life satisfaction and then combined with the 12 selected domains. The socio-demographic characteristics alone explained only five percent of the variance in life satisfaction. Combined with the 12 domains, they did not increase the explanatory power at all.

The Andrews (1974) study is closely related to the study by Campbell et al. (1976) in theoretical base and in the life domains selected for analysis. The results of the Campbell et al. study were based on a national sample of the United States. The data were collected by personal interviews with 2,164 persons. The interviews were conducted by the Survey Research Center during July and August, 1971. The Campbell et al. study, as with the Andrews (1974) study, hypothesized that overall life satisfaction was dependent on an individual's subjective evaluation of specific life domains. The

theoretical model contained 12 aspects or domains of a person's life that could possibly be related to overall satisfaction with quality of life. The 12 domains selected by Campbell et al. were: (1) health, (2) marriage, (3) family life, (4) life in the United States, (5) friendships, (6) housing, (7) occupation, (8) neighborhood, (9) religion, (10) spare time, (11) financial situation, and (12) organizations. Selection of the domains was based on previous research, the relevance of the domains to public policy, and on the feelings of the researchers as to the significant areas of a person's life. The 12 domains selected by Campbell et al. closely correspond with those selected by Andrews (1974). The Campbell study included religion, organizations, and neighborhood domains where the Andrews study did not. Domains in the Andrews study that did not appear in the Campbell study include goods and services, individual self, and amount of fun.

Research findings of Campbell's et al. (1976) indicate that 53 percent of the variation in overall life satisfaction was explained by their 12 domains. The domains that contributed most strongly to overall life satisfaction were family life, marriage, financial situation, housing, and employment.

An additional similarity to the Andrews (1974) study is the inclusion of socio-demographic characteristics. The Campbell et al. (1976) study theorized that these characteristics impact on both the subjective and objective measures. For example, individuals of different races, ages, and income levels may have different sets of normative criteria from which they evaluate the objective domains. Also, these characteristics may influence an individual's personality, thus affecting how he or she perceives a specific domain.

In 1976 a study of quality of life based on Campbell's et al. (1976) theoretical model was done with Oklahoma families (Pruitt, 1977). Six life domains were found to be significant in explaining overall life satisfaction. These domains were: standard of living, spare time, family life, friendships, health, and education. An increase in satisfaction with each domain was accompanied by an increase in satisfaction with overall life quality.

Conceptual Model

Quality of Life Theory

For this particular study, as with Campbell et al. (1976) and Pruitt (1976), satisfaction with overall quality of life was analyzed as the dependent variable, dependent on the subjective responses to the domains under investigation. The domains utilized for this study included the following: (1) standard of living, (2) savings and investments, (3) friendships, (4) family life, (5) neighborhood, (6) location of residence, (7) type of structure, (8) life in the United States, (9) life in Oklahoma, (10) occupation, (11) spare time, (12) level of education, and (13) health.

Overall life satisfaction was perceived to be dependent on an individual's attitudes about some or all of these domains. Life satisfaction was essentially considered to be a cognitive assessment of one's progress toward desired goals (Campbell et al., 1976). If the desired or normative state has been achieved for a number of the domains under investigation, one would assume the result would be satisfaction with life in general.

All of the domains under investigation were measured as to the degree of satisfaction associated with each domain. Level of satisfaction was defined in the following context: "The perceived discrepancy between aspiration and achievement, ranging from perception of fulfillment to that of deprivation" (Campbell et al., 1976, p. 8).

It should be recognized that levels of satisfaction differ from individual to individual. One person's satisfaction level might be achieved by the accomplishment of very few goals, while another person will have high expectations and goals to reach before satisfaction is achieved. Regardless of the criteria each individual establishes, the result is that each person is equally satisfied if they have achieved their personal goals. Dissatisfaction with a particular domain is experienced when the person does not accomplish the expected goals of that particular domain.

The conceptual model on which this research is based is derived from the model on which Campbell et al. (1976) based their research. The model incorporates not only objective measures, but subjective measures of a person's perception of a given domain and the standard by which the domain is judged. Both objective and subjective indicators are important.

As Figure 1 indicates, given a specific objective component of a person's life, a certain sequential chain of events occurs before an individual expresses satisfaction or dissatisfaction with that particular domain. An individual has a specific set of criteria by which he or she evaluates a specific objective domain. The criteria can be based on individual norms or standards, or on societal norms or standards, or a combination of these. If a person's perceived

state of an objective domain is congruent with the criteria for that domain, then satisfaction should be expressed.

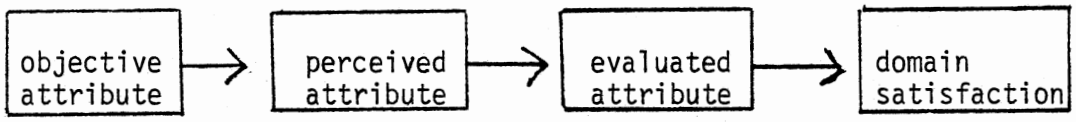

Figure 1. Model of Relationship Between Objective Attribute and Domain Satisfaction

Socio-demographic characteristics of the individual also play an active role in the overall conceptual model. An individual's race, age, and income are hypothesized to affect both directly and indirectly the subjective response to a domain. Individuals of different races, ages, and incomes may have different criteria by which they evaluate the objective domains. An individual's personality also affects the perceived objective attribute (i.e., pessimism versus optimism).

Implicit in the model is the assumption that objective measures are inadequate in themselves to explain a person's overall satisfaction with quality of life. These objective characteristics are perceived and evaluated by persons as they express their satisfaction with a given domain of their lives. Also implicit in the model is the belief that satisfaction with a specific life domain is dependent upon the perception of many attributes of that environment, rather than just one attribute.

Housing Satisfaction Theory

Housing has been considered an important aspect in a person's overall evaluation of his or her life by several researchers and scholars.

> It is easy to understand why housing is so important to all households, and perhaps more important to the poor than the non-poor. Many people--particularly housewives, children, and the elderly spend more time in the home than in any other place, and so the nature of the space is an important determinant of personal and family satisfaction (Hartman, 1975, p. 3).

According to Hartman, the element of time spent in the home is a crucial aspect of why housing is important or significant in a person's life. Housing is not equally important for every individual or family, as the time spent at home varies and values vary, but the housing environment experienced by individuals and families has the potential for influencing their overall life satisfaction. Agan and Luchsinger (1965) also express the significance of the house in a person's life:

> In an age in which the everyday scene is dominated by progress and change, we as human beings require both a home base which will supply us with an environment suitable to the fulfillment of our needs in the private order, and an outreach which allows the public order to be readily accessible. The most important influences in life are shaped by intimate relationships. The house, because it fosters relationships between its members, is the prime conditioner of our way of life. It supplies potential for resourceful living and self fulfillment, creating channels for finding satisfaction in meaningful pursuits (p. 4).

Previous research examined families and their housing by the concepts of adjustment and maladjustment. The studies by Riemer (1943, 1945, 1947) were based on a family's ability to adjust or not adjust to its house. Research by Rossi (1955) expanded on Riemer's hypothesis

of "maladjustment to the family home" and incorporated family composition and residential mobility as being influential in family housing behavior. Rossi believed that a family's housing needs were determined by the composition of the family, and that a family would relocate so that the housing more closely met the demands of the family size. Rossi's view of family composition and residential mobility, as an explanation for family housing behavior, was tested and substantiated by several researchers (Smith, Kivlin, and Sinden, 1963; Speare, 1970; Chevan, 1971; Long, 1972).

Sabaugh, Van Arsdol, and Butler (1969) also believed that stage in the family life cycle served as a motivating force for residential mobility. However, they incorporated a new aspect to their overall theory by inferring that family composition and residential mobility are dependent on family and cultural norms.

In 1975, Morris and Winter expanded the work intiated by Sabaugh et al. (1969). The Morris et al. theory closely parallels the rationale of the theory utilized by Campbell et al., 1976. Both theories hypothesize that satisfaction is related to the way in which an individual perceives his or her present state in relation to some normative (cultural or familial) condition or goal.

According to the theory developed by Morris et al. (1975), families are continuously evaluating their housing to determine if it meets standards or norms at two levels: (1) societal/cultural and (2) family. The existence of cultural norms is based on individuals identifying certain housing standards and on the rewards (sanctions) which exist for certain types of housing. Morris et al. are careful to caution about the tautological fallacy of measuring norms strictly

by the behavior exhibited in an individual's/family's housing. The housing conditions in which an individual/family resides do not necessarily reflect the desired type of housing. The housing may be the optimum the individual/family can achieve at that time, given the existing constraints.

Morris et al. (1975) view the culture of a society as an important factor in a family's identification of its housing needs. According to the theory, housing needs are not determined by minimum health and safety standards, but by standards developed from the culture. Existing housing is then judged by these cultural standards.

The theory hypothesizes that families are constantly attempting to adjust their housing to meet cultural standards/norms. If a family's housing does not meet the established standards, a deficit is perceived to exist. These deficits are the primary cause of housing dissatisfaction. As families experience reduced satisfaction they attempt to correct this deficit by (1) relocating to a more normative, acceptable type of housing, (2) adapting their present housing to meet the established standards, and (3) changing family norms so they are more compatible with the existing housing.

Housing satisfaction occurs when a family perceives its present housing as meeting acceptable normative standards. Housing norms that have been hypothesized to influence housing satisfaction are (1) space norms, (2) tenure norms, (3) structure type norms, and (4) quality norms. Housing characteristics have been tested empirically against these norms and results indicate that these housing norms do influence housing satisfaction (Campbell et al., 1976; Onibokun, 1976; Morris et al., 1976; Reardon and Boles, 1978; Rogers

and Nikkel, 1979; Rossi, 1955; Speare, 1974; Meeks, Merchant, and Bernard, 1977; Stewart and McCown, 1977).

Housing Satisfaction Research

Tenure and Structure Type

Tenure has been found to be related to housing satisfaction (Campbell et al., 1976; Onibokum, 1976; Rossi, 1955; Speare, 1974; Rent and Rent, 1978). Persons who own their own housing indicate higher levels of housing satisfaction than do persons who are renting. Cultural sanctions motivate individuals to obtain home ownership. Home owners can deduct mortgage payments and property tax from their taxable income. Also, the investment in a home is usually a profitable one in that homes increase in value over time, resulting in an increase in the consumer's investment.

Rogers and Nikkel (1979) found one exception to a positive relationship between housing satisfaction and home ownership when investigating the housing satisfaction of large, urban families. They attributed this unusual relationship to the relatively low income levels of families in the sample. Families in this area of Boston were primarily Polish immigrants employed in skilled labor or clerical positions. The families realized home ownership was highly unlikely and thus did not hold homeownership as a family housing norm.

Preference for a specific type of dwelling structure has also been found to be related to housing satisfaction. Morris et al. (1976) and Rent and Rent (1978) found a single family detached home to be preferable over alternatives such as mobile homes and multi-family

units. In most instances, the norm was a single detached unit. This was particularly true for families with children. However, the norm for families without children was somewhat more relaxed and permits multi-family living. The single detached unit, as with home ownership, has been found to be associated with a feeling of satisfaction and independence for the individual.

Space

The norm for housing space has also been defined by society. This norm has been found to be dependent upon family size and composition. Housing space norms suggest that not more than two persons should share a bedroom, and in the case of children, age and sex become a factor. Children of opposite sex may share a bedroom if they are under six years of age. When the age exceeds six, only children of the same sex should share bedrooms (Morris et al., 1976).

Previous research findings indicate the number of rooms and the number of persons-per-room are related to housing satisfaction. Morris et al. (1976) found a positive relationship between number of rooms and housing satisfaction. Speare (1974) and Stewart and McCown (1977) also found a negative relationship between persons-per-room ratio and housing satisfaction. As the number of persons-per-room increases, creating a higher density living environment, housing satisfaction decreases.

Quality

There are also norms for housing quality. The perceived quality of a family's home is based on certain standards formed by society

(Morris et al., 1976). The norms for quality are not as specific and clear cut as are the norms for space, tenure, and structure type. The reason for this lack of specificity is that the norm for housing quality is based on socio-economic status of the family. A family's standard for housing quality is based on its level of income. A family's income determines the number of improvements it can afford to make on the home, and also affects its ability to maintain the home in optimum condition and prevent structural deterioration and decay. A family thus becomes satisfied with a certain level of quality, because it is the best it can afford, given the income constraint. A variable closely associated with structural quality is age of the dwelling. Usually, structural deterioration is found in older homes.

Length of Residence and Housing Cost

Length of residence and housing cost have also been found to be related to housing satisfaction (Rogers and Nikkel, 1979). As length of residence increases, it is accompanied by an increase in housing satisfaction. As could be expected, housing cost is inversely related to housing satisfaction. As housing cost increases, housing satisfaction decreases.

Pruitt (1977) also analyzed the housing characteristics related to housing satisfaction. Tenure, age of dwelling, and structural quality were found to be related to housing satisfaction. Home ownership and high structural quality were also indicators of higher perceived housing satisfaction. A negative relationship was found between age of dwelling and housing satisfaction. Those persons in older units were less satisfied.

Socio-Demographic Characteristics

Socio-demographic characteristics indirectly affect housing satisfaction in that they make it possible for a family to attain normative housing or act as a constraint in this process. Morris et al. (1976) view socio-demographic characteristics as extrafamilial conditions that influence whether or not a family can obtain normative housing. The socio-demographic characteristics frequently examined in relation to housing include: age, sex, marital status, race, income, and education. These personal characteristics may act as constraints in obtaining normative housing because of the discrimination associated with certain characteristics. For example, race may affect the amount of income an individual can earn and subsequently the quality and type of housing he/she can occupy. This discrepancy is due to discriminatory social practices, in a society that values whites in comparison to non-whites. Therefore, whites generally live in housing that more closely follows normative criteria.

Age of the respondent is also related to housing quality and income. A person's income frequently declines at or following retirement. This decline, coupled with a deteriorating physical condition, results in a lowering of the quality of housing for many elderly persons.

Marital status affects a person's ability to obtain normative housing. If a person is divorced, particularly a female head of household, negative sanctions such as limited access to credit are experienced. This would particularly affect the possibility of homeownership. If being a female head of household is combined with being black, the

household is placed in a double bind. This double bind also occurs with an older, widowed, female. She not only has to deal with discrimination associated with being elderly, but the further discrimination associated with being a female head of household.

Income levels also create constraints to obtaining normative housing. As was mentioned in the discussion of the norm for housing quality, a family's income affects the quality of its home. If income is low, the family may have very limited funds for home maintenance. Also, low income families have more difficulty in making down payments for home purchase. Therefore, income affects tenure. Since most rental property is multi-unit rather than single family, income is related to structure type.

Closely related to income level are the socio-demographic characteristics of education and occupation. Usually, as a person's education level increases, a subsequent increase in income occurs. Therefore, one would hypothesize that persons with higher levels of education would be more likely to obtain normative housing than would persons of lower education levels. The same is true with occupation. Those persons who are employed have a greater opportunity to live in normative housing in comparison with those who are not employed or retired.

Previous research has found socio-demographic characteristics to be related to housing satisfaction (Yearns, 1972; Tucker, 1969; Campbell et al., 1976; Onibokun, 1976; Inman, 1978; Reardon and Boles, 1978; Morris et al., 1976). Yearns (1972) and Tucker (1969) found a significant relationship between income and housing satisfaction. As a family's income level increases its level of housing satisfaction also increases. A positive relationship has been found between housing

satisfaction and age, income, education, and job status (Campbell et al., 1976; Pruitt, 1977). As income, age, education, and job status increases, a subsequent increase in housing satisfaction occurs.

Neighborhood Satisfaction

The neighborhood in which a family's house is located has been found to be related to housing satisfaction (Morris et al., 1976; Campbell et al., 1976; Rossi, 1955). A family evaluates it housing on not only specific characteristics of the structure (i.e., tenure, structure type, quality, and space), but extends this evaluation process to the surrounding environment (Keller, 1968; Gans, 1962, 1967, and 1968; Hinshaw and Allott, 1972; Lamman, 1964; Perry, 1939; American Public Health Association, 1960; Urban Land Institute, 1960). A family evaluates a neighborhood based on the following normative criteria: (1) area should be predominately residential, (2) accessible to quality schools, (3) quality streets and roads, (4) homogeneity regarding social class, race, and ethnic group (Mo-ris et al., 1976). If a family's neighborhood meets the normative criteria the results are not only expressed satisfaction with the area, but also an expressed satisfaction with housing.

The research reported here investigates (1) the relative influence of various life domains in explaining overall satisfaction with life, and (2) an analysis of the objective measures of respondent characteristics and housing characteristics related to the subjective measures of housing and neighborhood satisfaction for a sample of Oklahoma households. It will attempt to identify factors which influence

housing satisfaction, resulting in a greater understanding of the specific characteristics of the housing domain and the degree to which it is related to a broader concept, quality of life.

CHAPTER III

METHODOLOGY

The data utilized for this study are derived from a larger research project entitled "The Quality of Life in Oklahoma" which was conducted by the Center for Economic and Management Research, College of Business Administration, University of Oklahoma. The purpose of the project was to compile profiles and attitudes of Oklahomans and then compare these characteristics to certain lifestyles and perceptions of quality of life. Data were collected in each of the following categories: city and neighborhood services, incidence of crime, housing, condition of state and country, education, employment, use of leisure time, health care, income, and family life. The data were collected in 1976 and then again in 1979. This study analyzed the 1979 data.

Description of Sampling Technique

The sample utilized in this research is a proportional, stratified, random sample of the state of Oklahoma. Two forms of stratification were used: (1) by geographic area, and (2) by the rural urban proportion of respondents in each geographic area.

The state was divided into the following four geographic regions: Tulsa SMSA, Oklahoma City SMSA, western half of the state and eastern half of the state. For example, 21 percent of the state population

resides in the Oklahoma City SMSA; therefore, 21 percent of the total sample for this project was taken from this area. A proportionate sample reflective of the rural/urban distribution was taken from each geographic region.

The selection of the households was done randomly. Maps of the counties in each area were obtained and numbers were assigned to each urban block and rural section. From a table of random numbers, specific block and section numbers were drawn. The specific households in the urban blocks and rural sections were also randomly selected. The specific respondent from each household was selected randomly. When a household was drawn into the sample, a list was made of all family members in the household. By referring to a specific selection table, the decision was made as to which family member over 18 years of age was to be interviewed. The sample consisted of 2,700 households.

Development of Instrument and Data Collection

Data were collected by personal interview. The interview schedule was composed of the following sections: (1) demographic characteristics of the sample; (2) characteristics of and satisfaction with city and neighborhood, housing, county and state, education, occupation, spare time, friendship, family life, health care, and general life satisfaction. Two criteria were utilized in the formulation of the questions: (1) if the question had been used in a previous research project, (2) if the question would reveal relevant information for the development of public policy. A majority of the questions were derived from the 1970 Census and from the Quality of Life Project conducted in

1971 by the Institute for Social Research at the University of Michigan.

The instrument was pretested three different times in order to insure clarity in the questions being asked. Five areas of the state were included in the pretesting phases (northeast, southeast, northwest, southwest, and central sections). In each pretest 300 respondents were selected. The selection was proportionate to the population of that region. T-test was the statistic utilized in analyzing for differences in responses between the three pretests.

Thirty-two questions were revised after the preliminary pretest. The instrument was again pretested in the same five areas with 300 respondents. With the exception of the 32 revised questions, very little difference was found when compared with the first pretest.

Following the administration of the second pretest, the interviewers gave suggestions as to the ordering of questions to improve the flow of the instrument. Appropriate rearrangement of some of the variables was made and the instrument was pretested the third time. No statistically significant differences were found between responses of the second and third pretest.

One hundred interviewers were hired to collect the data. The interviewers attended a workshop conducted by project staff members in order to develop the necessary skills to conduct an interview.

Analysis

Stepwise multiple linear regression was the statistical tool utilized in analyzing the data. Multiple regression allows the analyzation of the relationship between a dependent variable and a

set of independent variables. The linear regression equation is:

$$Y' = A + BX$$

where Y' is the estimated value of the dependent variable Y, B is a constant by which all values of the independent variable X are multiplied, and A is a constant which is added to each case. This equation enables values on one variable to be predicted by values on another variable (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1970).

In stepwise regression, predictors are entered sequentially into the regression equation rather than all being entered simultaneously (Mueller, Schuessler, and Costner, 1977). The purpose of the sequential entering of the predictors is to determine the increase in explained variation after a particular variable has been entered into the model. The ordering of entering the variables is usually done with the predictor that has the highest correlation with the dependent variable entered first, the second highest correlation with the dependent variable entered second, and so on.

This type of multivariate analysis was used in the statistical analysis of the hypotheses previously stated. The stepwise multiple regression test enables the researcher to determine which variables most strongly influence and explain overall satisfaction with quality of life and housing satisfaction.

For this particular study, prediction of an individual's overall life satisfaction was hypothesized to be dependent on 13 aspects (domains) of his or her life. Also, the prediction of the components which were related to a specific life domain, housing satisfaction,

were analyzed. The linear regression analysis identifies the amount of variation in overall life satisfaction which is accounted for by the linear influence of the domains and housing characteristics.

The regression summary tables have the following information to assist the reader in understanding the results of the analysis:

1. Unstandardized Beta Coefficient: Measures the accuracy of the prediction and the strength of linear association between the variation of a specific independent variable and the dependent variable when all other independent variables are held constant. It reflects the ratio of explained variation in the dependent variable Y to the total variation in Y (Nie et al., 1970).

2. Standardized Weighted Beta: Measures the influence of the independent variable on the dependent variable when all the variables in the model are operating simultaneously. In this statistic, X and Y are standardized to have unit variance (i.e., s.d. of X and Y = 1). This standardization equalizes the regression coefficients, not only to each other, but also to the simple correlation. The weighted beta coefficients will be used to interpret the results of the regression analysis (Nie et al., 1970).

3. F Statistic: Determines whether or not the Beta value is statistically significant after all the other independent variables have been introduced into the model, thus determining if it will remain in the model (Nie et al., 1970). For this particular study, α level for F was set at .05 level. At this α level, an F of 3.84 or greater was considered significant, an F of less than 3.84 was considered an insignificant contribution to the model. The criteria of 2.50 ($p \leq .10$) was also utilized in order to be sure that no variables were excluded

from the model that were not making significant contributions at the 3.84 level. However, even this less restrictive criteria did not result in the inclusion of any additional variables in the final models.

4. R^2: Measures the percentage of variance of the dependent variable explained by the independent variables; in this study the R^2 values will reflect the percentage of variance explained for overall life satisfaction and housing satisfaction.

5. Constant: The intercept point on the vertical axis--the place where the regression line begins.

Listwise deletion was used for all regression analysis. Percentages and frequencies were tabulated for each question viewed as relevant for this particular study. Pearson correlations were utilized to examine the relationships among all variables used in the overall theoretical models.

CHAPTER IV

HYPOTHESIZED MODELS FOR OVERALL SATISFACTION WITH QUALITY OF LIFE AND HOUSING SATISFACTION

Figure 2 illustrates the hypothesized model for explaining the variance in overall satisfaction with quality of life by selected life domains. The hypothesized model indicates that overall life satisfaction is dependent upon the subjective evaluations of specific life domains. Although not included in this model, prior theory (Campbell, Converse, and Rodgers, 1976) suggests that domain is dependent upon the degree to which an individual has achieved a desired or normative level for that particular domain. It is hypothesized that there will be a positive relationship between life domain satisfaction and satisfaction with overall quality of life and that some domains will contribute more than others to the explanation of variance in overall satisfaction with quality of life.

Previous research has used the life domain orientation in explaining overall life satisfaction (Campbell et al., 1976; Andrews, 1974). Comparisons will be made between domains that were significant in previous studies and the domains that were significant in this study. These comparisons will give insight into any changes which have occurred in the domains found to be significant in explaining overall satisfaction with the quality of life.

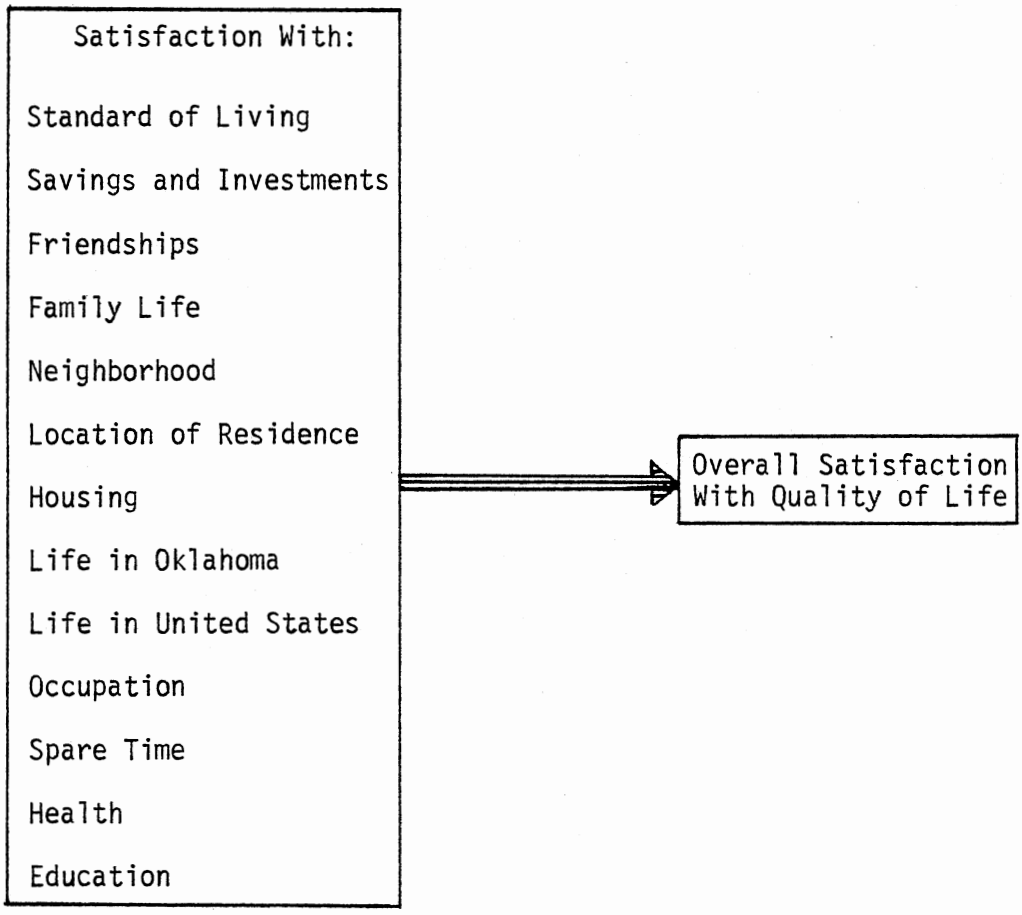

Figure 2. Hypothesized Model for the Relationship Between Satisfaction With Life Domains and Overall Satisfaction With Quality of Life

As Figure 3 illustrates, it was hypothesized that there would be a relationship between socio-demographic characteristics of the respondents and overall satisfaction with quality of life. Previous research on overall satisfaction with quality of life has included socio-demographic characteristics along with domain satisfaction variables in the theoretical models, anticipating an increase in overall explaining power (Campbell et al., 1976 and Andrews, 1974). However, socio-demographic characteristics had contributed very little to the explanation of variance in overall life satisfaction. The characteristics of age, sex, education, race, and employment status of respondent, along with family income, were included in the hypothesized model for this study. It was hypothesized that overall satisfaction would be positively related to age, education, and family income. It was further hypothesized that satisfaction would be greater for women than men, for whites than nonwhites, for marrieds than for nonmarrieds, and for employed than for unemployed (Campbell et al., 1976).

Housing Satisfaction

As Figure 4 illustrates, it was hypothesized that selected socio-demographic characteristics and housing characteristics are related to housing satisfaction. From the findings of previous studies utilizing similar models, certain relationships can be anticipated. Prior research has found that the following are related to higher housing satisfaction: home ownership versus renting, a single family versus multifamily unit, low person-per-room ratio, high structural quality, low housing costs, newer structures, and longer residence (Campbell et al., 1976; Onibokum, 1976; Morris, Crull, and Winter, 1976; Reardon

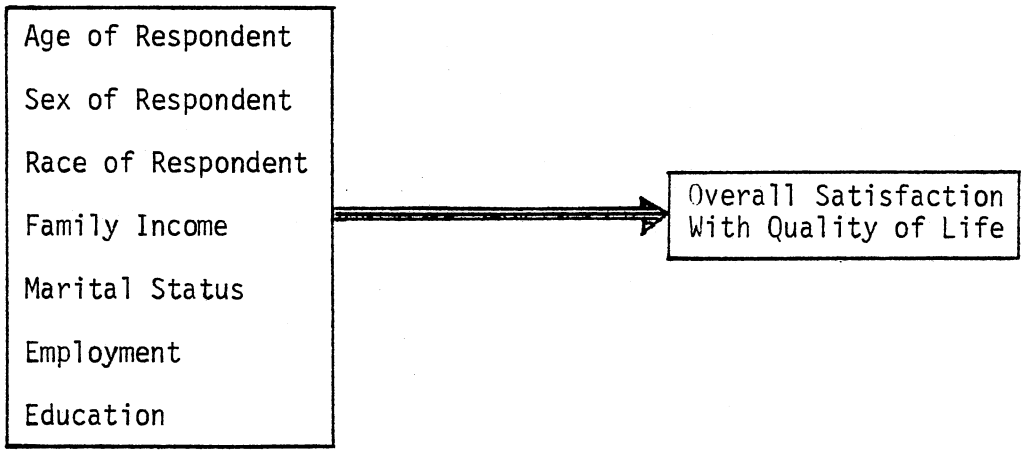

Figure 3. Hypothesized Model for the Relationship Between Socio-Demographic Characteristics and Overall Satisfaction With Quality of Life

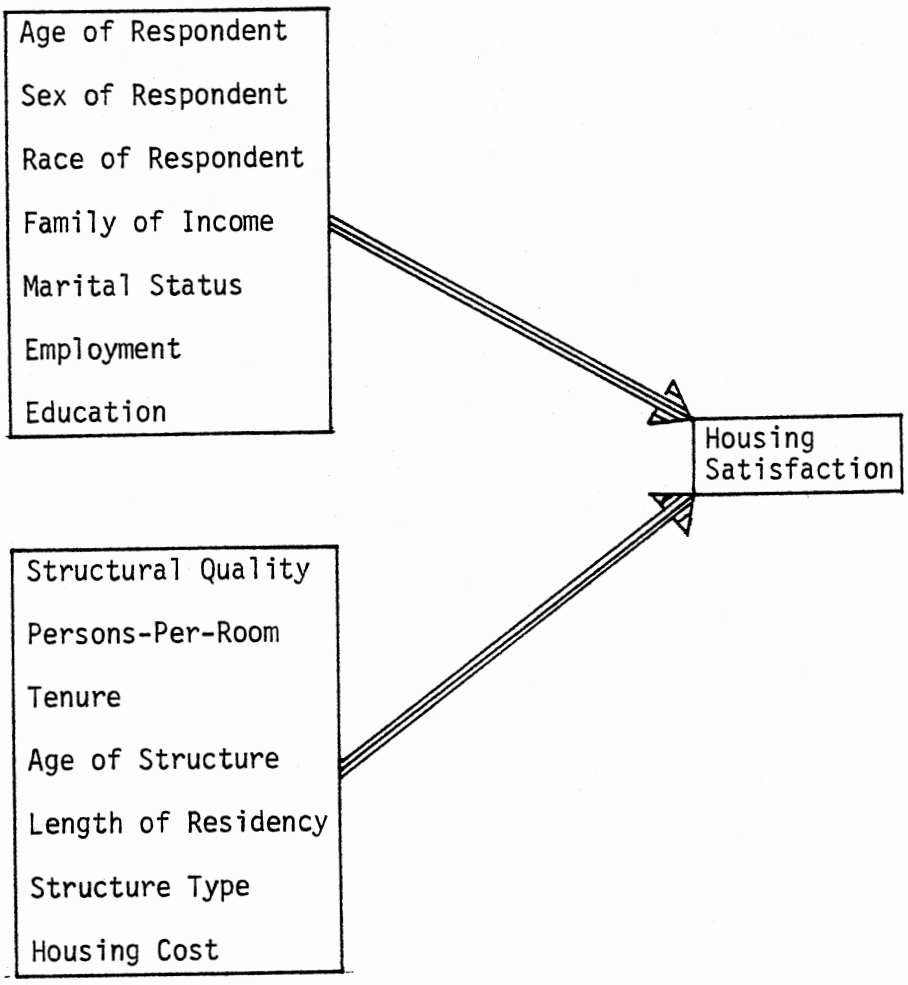

Figure 4. Hypothesized Model for the Relationship Between Socio-Demographic and Housing Characteristics and Housing Satisfaction

and Boles, 1978; Rogers and Nikkel, 1979; Rossi, 1955; Speare, 1974; Meeks, Merchant, and Bernard, 1977, Stewart and McCown, 1977).

Socio-demographic characteristics have also been found to be related to housing satisfaction (Yearns, 1972; Tucker, 1969; Campbell et al., 1976; Onibokun, 1976; Inman, 1978; Reardon and Boles, 1978; Morris et al., 1976). As levels of income, age, and education increase, an increase in housing satisfaction occurs. Prior research findings indicated that persons who were employed and/or married indicated higher levels of housing satisfaction in comparison to those individuals who are unemployed or not married.

When Oklahomans were studied in 1976, the following characteristics were found to be related to housing satisfaction: age, tenure, age of dwelling, and structural quality (Pruitt, 1976). Between 1976 and 1979 housing costs increased dramatically. Characteristics such as interest rates on mortgage loans and the cost of utilities and maintenance increased significantly. Home ownership of a single family detached unit is becoming increasingly more difficult to obtain.

These changes in the housing market could influence the relationship between housing characteristics and housing satisfaction. If families realize that ownership of a single family home is not within their reach, tenure and house type could be less important factors in housing satisfaction. At the same time, housing cost could increase in importance as individuals become more conscious of the higher costs.

As Figure 5 illustrates, it was hypothesized that neighborhood satisfaction is related to housing satisfaction. The relationship between neighborhood characteristics and neighborhood satisfaction

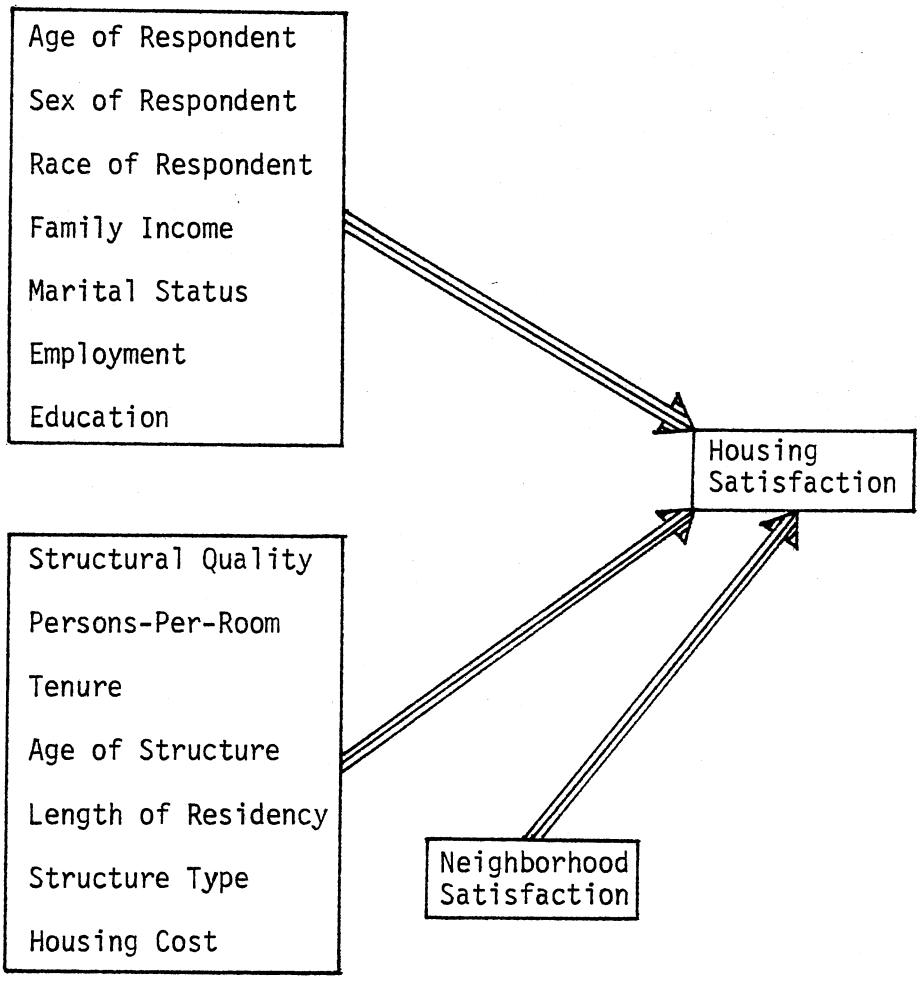

Figure 5. Hypothesized Model for the Relationship Between Socio-Demographic and Housing Characteristics and Neighborhood Satisfaction on Satisfaction

could be analyzed in the same way housing satisfaction was analyzed; but that is not within the scope of this study. The purpose here is to identify the contribution of neighborhood satisfaction to the explanation of variation in housing satisfaction.

Previous research substantiated that a family evaluates its housing on not only specific characteristics of the structure (i.e., tenure, structure, type, quality, and space), but extends this evaluation process to its surrounding environments (Morris et al., 1976). Neighborhood satisfaction was added to the theoretical model to assess the relationship between neighborhood satisfaction and housing satisfaction.

CHAPTER V

FINDINGS

Description of the Sample

Socio-Demographic Characteristics

Table I summarizes the socio-demographic characteristics of the total sample. Age of respondent ranged from 18-98, with the most frequent age being 25. The mean age was 49. The number of females responding exceeded males only slightly, 1517 versus 1217, respectively. Well over half of the respondents were white (89 percent), married (69 percent), and non-working (63 percent). The non-working characteristics included those respondents who were homemakers, unemployed (seeking work), retired or disabled, and students. The most frequent income range reported was $12,000-$13,999; average income range was approximately $11,500. The total number of respondents was 2734.

Since the sample for each regression model varied in size according to completeness of data for variables in the analysis, separate tables of percentages and frequencies for socio-demographic characteristics, life domain, and housing characteristics were compiled for each model utilized (Appendix B). This enabled comparisons to be made of the sample utilized in each regression model to the total sample, in order to determine if characteristics were significantly different.

TABLE I

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE (n=2734)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Age			49	25	18-98
Sex					
Male	1217	45			
Female	1517	55			
Race					
White	2413	89			
Non-White	313	11			
No Response	8				
Marital Status					
Married	1872	69			
Non-Married	860	31			
No Response	2				
Occupation					
Working	1009	37			
Non-Working	1725	63			
Income			$11,580	$12,000-13,999	$1-$80,000 & over
Education			11.79	12	1-26 (yrs.)
No Response	1				

Housing Characteristics

Table II indicates the frequencies and percentages for the responses to the questions concerning housing. All of the questions are reflective of the respondents' perceptions, with the exception

TABLE II

HOUSING CHARACTERISTICS (n=2734)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Structural Quality					
Very Well Kept Up	1684	62			
Mixed--Needs Paint	740	27			
Poorly Kept (Paint & Minor Repairs)	223	8			
Very Poorly (Dilapidated)	85	3			
Persons-Per-Room Ratio			.51	.50	0-2
No Response	14				
Tenure					
Owner	2085	76			
Non-Owner	639	24			
No Response	10				
Age of Structure					
< 5 Years	286	11			
5-25 Years	1367	50			
> 25 Years	1079	39			
Length of Residency			10.34	1	1-77
No Response	2				
Housing Cost					
Very Low	129	5			
Low	400	15			
Average	1443	55			
High	517	19			
Very High	159	6			
No Response	86				
Type of Structure					
Single Family Detached	2296	84			
Other	436	16			

of the structural quality question. This housing characteristic was measured by the observation of the interviewer. Over half of the housing was evaluated as being very well kept up. Slightly over one-fourth of the housing was evaluated as being in need of paint.

The mean person-per-room ratio of .51 indicated that, on the average, households were not experiencing a high density if the usual criteria of one person-per-room is considered as an appropriate crowding index.

Over three-fourths of the respondents were home owners, residing in single family, detached units. This high percentage was expected because of the structure and tenure norms in American society. Fifty percent of the houses were 5-25 years old. Length of time residents had resided in their homes ranged from 1-77 years, with the mode being one year, but the mean being 10.34 years. Over one-half considered their housing costs to be average.

Satisfaction With Life Domains

Table III indicates the reported levels of satisfaction/dissatisfaction with the 13 life domains. High levels of satisfaction were reported for all the domains. Over one-half of the sample reported being completely satisfied with the following aspects of their life: family life, friendships, house/apartment, neighborhood, and city of county. The remaining domains were all heavily weighted on the positive end of the scale, with slightly less than 50 percent indicating the highest level of satisfaction. Amount of education received and amount of spare time activity were the domains with the smallest percentage of respondents indicating complete satisfaction.

TABLE III

SATISFACTION WITH LIFE DOMAINS (n=2734)

Domain	Freq.	%
Spare Time		
Completely Satisfied	1065	39
	627	23
	412	15
Neutral	368	13
	132	3
	69	3
Completely Dissatisfied	59	2
No Response	1	
Health		
Completely Satisfied	1147	42
	666	24
	306	11
Neutral	286	10
	152	6
	71	3
Completely Dissatisfied	99	4
No Response	7	
Family Life		
Completely Satisfied	1425	52
	691	25
	271	10
Neutral	186	7
	69	3
	42	2
Completely Dissatisfied	21	1
No Response	6	
Friendships		
Completely Satisfied	1494	55
	560	20
	282	10

TABLE III (Continued)

Domain	Freq.	%
Friendships (cont.)		
Neutral	265	10
	76	3
	33	1
Completely Dissatisfied	22	1
No Response	2	
Standard of Living		
Completely Satisfied	1134	42
	559	20
	378	14
Neutral	366	13
	168	6
	59	2
Completely Dissatisfied	69	3
No Response	1	
Amount of Education Received		
Completely Satisfied	834	42
	377	15
	301	12
Neutral	486	19
	226	9
	138	5
Completely Dissatisfied	189	7
No Response	183	
House/Apartment		
Completely Satisfied	1540	57
	547	20
	230	8
Neutral	241	9
	72	3
	38	1
Completely Dissatisfied	59	2
No Response	7	

TABLE III (Continued)

Domain	Freq.	%
Savings and Investments		
Completely Satisfied	1134	42
	559	20
	378	14
Neutral	366	15
	168	6
	59	2
Completely Dissatisfied	69	3
No Response	5	
Neighborhood		
Completely Satisfied	1682	62
	480	18
	208	7
Neutral	217	8
	63	2
	28	1
Completely Dissatisfied	51	2
No Response	5	
City/County		
Completely Satisfied	1382	51
	482	18
	338	12
Neutral	359	13
	81	3
	39	1
Completely Dissatisfied	52	2
Life in the United States		
Completely Satisfied	1315	48
	592	22
	336	12
Neutral	308	11
	103	4
	34	1

TABLE III (Continued)

Domain	Freq.	%
Life in the United States (cont.)		
Completely Dissatisfied	44	2
No Response	2	
Life in Oklahoma		
Completely Satisfied	1175	43
	749	27
	373	14
Neutral	328	12
	64	2
	26	1
Completely Dissatisfied	17	1
No Response	2	
Occupation		
Completely Satisfied	1175	43
	749	27
	373	14
Neutral	328	12
	64	2
	26	1
Completely Dissatisfied	17	1
No Response	1616	

Measure of Life Satisfaction

The complexity of the concept of overall life satisfaction necessitated the formation of a composite measure of the variable.

> The conventional way to increase the reliability of psychological measurement is by a kind of triangulation which attempts to measure the same underlying entity by

> a variety of means, cumulating the result to form a more stable single estimate. In our case, this means compounding a number of items that appear to be measuring the same thing. Thus, a broader and more reliable measurement base is established (Campbell, Converse, and Rodgers, 1976, p. 49).

The data included three measures of overall life satisfaction. One measure involved 10 bipolar adjectives which measure an individual's feelings about his/her present life on a seven point scale (Appendix A). Two single item measures were also utilized: a 1-7 scale and a 1-100 scale which assessed in one question, "how satisfied are you with your life as a whole these days?"

A factor analysis was done on the 10 bipolar adjectives in order to determine degree of intercorrelation among these 10 items. With the exception of two items (easy/hard, and tied down/free), the factor loadings were all .58 or higher (Table IV), indicating that they do relate well together. This same set of 10 bipolar adjectives were included in the study by Campbell et al. (1976). The factor analysis on the 10 items in the Campbell study produced findings similar to those in this study.

> . . . two of the ten life descriptions--the easy/hard and free/tied down scales--fail to fit very clearly with the other eight items. This does not mean that they lack interest in and of themselves, or that they have no relationship to a generalized sense of well being. But as they behave rather distinctly, it is useful to keep them separate from any composite measure involving the other eight highly intercorrelated items (Campbell et al., 1976, pp. 49-50).

An additional item (the single 1-7 measurement of life satisfaction) was added to the eight remaining bipolar adjectives in a second factor analysis program. As the factor loadings in Table V indicate, the single item measure of life satisfaction related strongly with the eight bipolar adjectives. This composite of nine items measuring

overall life satisfaction, was also used by Campbell et al. (1976) in their final form of measurement.

TABLE IV

FACTOR ANALYSIS OF TEN BIPOLAR ADJECTIVES

Adjectives	Factor Loadings
Boring/Interesting	.6763
Enjoyable/Miserable	.6897
Easy/Hard	.3680
Useless/Worthwile	.5838
Friendly/Lonely	.6282
Full/Empty	.7251
Discouraging/Hopeful	.6543
Tied Down/Free	.4675
Disappointing/Rewarding	.7533
Enables/Defeats	.7226

Overall Satisfaction with Quality of Life

Life Domain Satisfactions

The correlation matrix for all variables included in the hypothesized model for overall satisfaction with quality of life is shown in Table VI. Table VII indicates the contributions of life domain satisfactions to the explanation of the variance in overall satisfaction

with quality of life. As the R^2 indicates, 32 percent of the variance in life satisfaction was explained by 8 of the 13 domain variables. Satisfaction with neighborhood, city or county and life in the United States, life in Oklahoma, and occupation did not make significant contributions, so they were removed from the reduced model.

TABLE V

FACTOR ANALYSIS OF EIGHT BIPOLAR ADJECTIVES WITH SINGLE 1-7 ITEM MEASURE OF LIFE SATISFACTION

Adjectives	Factor Loadings
Boring/Interesting	.6901
Enjoyable/Miserable	.6812
Useless/Worthwhile	.5944
Friendly/Lonely	.6288
Full/Empty	.7376
Discouraging/Hopeful	.6404
Disappointing/Rewarding	.7521
Enables/Defeats	.7150
Satisfaction with Life as a Whole	.5354

Criteria for removing variables from the model was based on an F ratio of 3.84 or greater, which has a probability of .05. An F of 2.50 ($p \leq .10$) was also utilized to determine if any other variables would enter into the model when a less restrictive test was utilized. No variables entered the model by reducing the value of the F ratio.

TABLE VI

CORRELATION MATRIX OF HYPOTHESIZED MODEL OF OVERALL SATISFACTION WITH QUALITY OF LIFE

2	.34																			
3	.27	.41																		
4	.24	.17	.15																	
5	.45	.29	.26	.47																
6	.15	.16	.o7	.12	.17															
7	.19	.18	.25	.13	.25	.28														
8	.20	.22	.35	.15	.24	.34	.35													
9	.16	.16	.25	.11	.15	.32	.29	.56												
10	.22	.17	.26	.24	.30	.25	.29	.41	.34											
11	.25	.21	.24	.25	.32	.22	.31	.31	.26	.44										
12	.21	.19	.22	.17	.25	.22	.23	.21	.23	.33	.31									
13	.07	.13	.16	.11	.12	.16	.14	.19	.18	.23	.20	.15								
14	-.20	-.20	.24	.16	.21	.23	.25	.30	.26	.34	.31	.50	.23							
15	-.04	-.02	.06	.04	.01	.07	.03	.01	.06	.03	.01	.04	.02	-.03						
16	-.23	.19	.21	-.15	-.23	-.11	-.25	-.23	-.30	-.17	-.17	-.11	.22	-.07	.04					
17	.02	-.07	.12	.02	.03	.07	.04	.10	.07	.03	.01	.01	.02	-.06	.03	-.04				
18	-.05	.03	.06	-.07	-.07	-.02	-.03	-.10	-.13	-.06	-.10	-.03	.14	.01	.29	.37	.01			
19	.04	.06	.05	.04	.01	-.12	-.13	-.17	-.17	-.01	.04	.00	-.23	.13	-.14	-.32	-.17	-.34		
20	.01	.03	.02	.04	-.02	-.03	-.09	.07	-.05	.02	.04	-.19	-.08	.14	.21	.14	.13	.11	-.39	
21	.09	-.02	.01	.01	.11	-.26	-.01	-.06	-.09	.06	.05	.05	-.21	.09	.32	-.35	-.07	-.13	.10	.09
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1. Location of Residence
2. Neighborhood Satisfaction
3. Housing
4. Life in U.S.
5. Life in Oklahoma
6. Level of Education
7. Occupation
8. Standard of Living
9. Savings and Investments
10. Spare Time
11. Friendships
12. Family Life
13. Health
14. Overall Life Satisfaction
15. Sex
16. Age
17. Race
18. Employment
19. Income
20. Marital Status
21. Education

TABLE VII

MULTIPLE REGRESSION OF OVERALL SATISFACTION WITH QUALITY OF LIFE ON SIGNIFICANT LIFE DOMAINS

Satisfaction With Life Domains	Coefficient	Beta	F Ratio
Spare Time	1.1177	.1775	80.76
Health	0.9910	.1699	76.72
Family Life	1.0823	.1579	96.90
Friendships	0.9086	.1225	43.85
Standard of Living	0.7359	.1207	29.52
Amount of Education Received	0.4122	.0818	21.21
House/Apartment	0.4729	.0696	14.82
Savings/Investments	0.1916	.0425	3.93
Neighborhood	--	--	--
City/County	--	--	--
Life in the U.S.	--	--	--
Life in Oklahoma	--	--	--
Occupation	--	--	--
Constant 64.5874			

Reduced Model	Full Model
R^2 = .32	R^2 = .28
F = 142.42	F = 31.84
df = 8 and 2.501	df = 12 and 993
$p \leq .05$	$p \leq .05$
N = 2,509	N = 1,005

The positive signs of the weighted beta coefficients indicate all of the variables are related positively to overall life satisfaction. As satisfaction with a particular domain increases, it was accompanied by an increase in satisfaction with life quality.

Satisfaction with the way in which spare time was spent (B=.1775) had the strongest influence on overall satisfaction with quality of life. The second most influential life domain was health (B=.1699). Those respondents who were more satisfied with their present health indicated higher overall life satisfaction. The remaining domains that contributed significantly in explaining life satisfaction were family life (B=.1579), friendships (B=.1225), standard of living (B=.1207), amount of education received (B=.0818), house or apartment (B=.0696), and savings and investments (B=.0425). As satisfaction with each domain increased, there was an accompanying increase in overall life satisfaction.

Comparison of these findings to previous research indicates some commonalities in findings about the relationship between life domain satisfaction and overall life satisfaction. Domains found to be significant in explaining overall life satisfaction in this study and also in the two national studies (Campbell et al., 1976; Andrews, 1974) were family life, housing, savings and investments, spare time, and health. Domains found to be significant in the Pruitt (1976) study of Oklahoma families and this study include (in order of highest explaining power): standard of living, spare time, family life, friendships, health, and education. These comparisons indicate that there are very few differences between what Oklahomans identified as being significant to life satisfaction in 1976 and in 1979. The

primary difference is in the ranking of the domains. In 1979, spare time, health, and housing appear to be more influential than they were in 1976. The influence of family life remained the same in 1976 and 1979.

Prior research findings indicate that housing satisfaction and neighborhood satisfaction are highly interrelated variables. Neighborhood satisfaction may have dropped from this model because of multicollinearity. When two variables are highly correlated, the variable with the strongest explaining power remains in the model; in this instance, housing satisfaction. The Pearson correlation between housing satisfaction and neighborhood satisfaction was .41.

Housing satisfaction was not found to be significantly related to overall life satisfaction in the 1976 study of Oklahoma families, but it was significant in this 1979 study. Changes in the economy have resulted in higher housing costs. Many families are now forced to pay a higher percent of their income for housing than they did in 1976. Home ownership is becoming increasingly more difficult to attain--especially for younger families. These changes provide justification for singling out housing satisfaction for a more in-depth analysis. Later sections of this chapter present hypothesized models and the analysis to explain housing satisfactions.

Age and income for the sample included in the analysis of this model were slightly different from the overall sample. Average age increased from 49 to 51, most frequent income range increased from $12,000-$13,999 to $14,000-$15,999. For a detailed comparison of socio-demographic characteristics and responses to domain satisfaction for this model and the overall sample, refer to Appendix B.

Socio-Demographic Characteristics

Table VIII indicates the contributions socio-demographic characteristics have in explaining the variance in overall satisfaction with quality of life. Some of the socio-demographic characteristics were nominal in measurement form; therefore, these variables were dichotomitized for the regression analysis. Marital status was reduced to 0=non-married, 1=married; race, 0=non-white, 1=2hite; and occupation, 0=non-working, 1=working.

TABLE VIII

MULTIPLE REGRESSION OF OVERALL SATISFACTION WITH QUALITY OF LIFE ON SOCIO-DEMOGRAPHIC CHARACTERISTICS

	Coefficient	Beta	F Ratio
Age of Respondent	.7867	.1595	48.64
Marital Status	2.4008	.1161	25.70
Level of Education	.2636	.0915	13.85
Income	.1566	.0939	12.98
Employment	--	--	--
Race of Respondent	--	--	--
Sex of Respondent	--	--	--
Constant 40.65			

Reduced Model	Full Model
R^2 = .05	R^2 = .05
F = 28.22	F = 16.66
$p \leq .05$	$p \leq .05$
df = 4 and 2,177	df = 7 and 2,167

As the R^2 indicates, only five percent of the variance in life satisfaction is explained by a combination of four of the seven socio-demographic characteristics. Age, marital status, education, and income made significant contributions in the directions that were hypothesized. Employment, race, and sex of respondent did not contribute significantly.

Age (B=.1595) was the strongest contributor to overall life satisfaction. The positive beta coefficient indicates that as an indivudal's age increases, life satisfaction also increases. A positive relationship also occurred between marital status (B=.1161) and life satisfaction; married respondents were more satisfied with life quality than non-married respondents. Education (B=.0915) and income (B=.0939) were also positively related to overall life satisfaction. As levels of education and income increased, life satisfaction also increased.

These findings paralleled those of Andrews (1974), who found that socio-demographic characteristics of respondents explained only five percent of the variance in overall life satisfaction. The measures of satisfaction with the various life domains had a much stronger explaining power than did the socio-demographic characteristics in this study and in previous studies. This greater explaining power could be attributable to the domains being a subjective evaluation of various objective characteristics related to particular domains. The domain satisfactions are a more inclusive measure than are the measures of socio-demographic characteristics. Analysis of the relationship of socio-demographic characteristics with housing satisfaction is discussed in the following section.

Age of respondent and income were the only two socio-demographic characteristics which were different for the sample in this model in comparison to the overall sample. Individuals in this sample were slightly older (49 in comparison to 47), and the modal income range was higher ($12,000-$13,999 compared to $10,000-$11,999).

Housing Satisfaction

Housing and Socio-Demographic Characteristics

All housing and socio-demographic characteristics that were available in these data were included in the full model in order to determine their relationship with housing satisfaction. The correlation matrix for all these variables is shown in Table IX. Five variables were dichotomized for the regression analysis: structure type 0=other, 1=single family detached unit; tenure 0=non-owner, 1=owner; race 0=non-white, 1=white; employment 0=non-working, 1=working; and marital status 0=non-married, 1=married. It should be recognized that the only measure of housing quality was the interviewers' assessment of the respondent's home.

Table X shows the regression analysis of the housing and socio-demographic characteristics that made significant contributions in explaining the variance in housing satisfaction. As the R^2 indicates, 17 percent of the variance in housing satisfaction was explained by seven of the housing characteristics and one of the socio-demographic characteristics, and the direction of the relationships were as hypothesized. Race, income, sex, employment, marital status, and education did not make significant contributions.

TABLE IX

CORRELATION MATRIX FOR HYPOTHESIZED MODEL
OF HOUSING SATISFACTION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	-.05															
3	.03	0.04														
4	-.04	.19	-.13													
5	-.01	.58	-.03	.15												
6	.09	-.26	.10	-.23	-.31											
7	-.06	.21	-.12	.41	.17	-.26										
8	.29	.37	.01	.03	.22	.00	.06									
9	-.14	-.33	-.17	.06	-.16	-.25	.05	-.34								
10	.21	.14	.13	-.02	.11	.18	-.02	.11	.39							
11	.05	-.16	.06	-.18	-.24	.44	-.14	.03	-.14	.16						
12	.06	.29	.07	-.07	.38	.03	-.08	.13	-.30	.15	-.25					
13	.07	-.03	.16	-.20	.01	.26	-.30	.04	-.31	.18	.06	.37				
14	-.02	-.50	.10	-.15	-.33	.17	.23	-.15	.13	-.30	.11	-.12	.16			
15	.07	.05	.10	.01	-.00	-.02	.06	.04	-.07	.04	-.02	-.02	.03	.02		
16		-.34	-.06	-.01	-.20	.00	.01	-.13	.46	.10	-.06	-.24	-.29	.02	.08	

1. Sex of Respondent
2. Age
3. Race
4. Neighborhood Satisfaction
5. Length of Residence
6. Tenure
7. Housing Satisfaction
8. Employment
9. Income
10. Marital Status
11. Structure Type
12. Age of Structure
13. Structural Quality
14. Persons-Per-Room
15. Housing Cost
16. Education

TABLE X

MULTIPLE REGRESSION OF HOUSING SATISFACTION ON HOUSING AND SOCIO-DEMOGRAPHIC CHARACTERISTICS

	Coefficient	Beta	F Ratio
Condition of Respondent's House	.4367	.2392	138.52
Tenure	.3648	.1082	24.70
Age of Respondent	.7746	.1082	20.31
Persons-Per-Room	-.4233	-.0823	15.22
Length of Residence	.9444	.0787	11.43
Age of Respondent's Structure	-.1497	-.0681	9.54
Housing Cost	-.8349	-.0521	8.51
Type of Structure	.2065	.0528	6.56
Race of Respondent	--	--	--
Family Income	--	--	--
Sex of Respondent	--	--	--
Employment	--	--	--
Marital Status	--	--	--
Education	--	--	--
Constant 6.61			

Reduced Model	Full Model
R^2 = .17	R^2 = .18
F = 68.80	F = 22.22
df = 8 and 2,604	df = 14 and 2090
$p \leq .05$	$p \leq .05$
n = 2612	n = 2104

The condition of the respondent's house had the strongest relationship with housing satisfaction. The positive standardized beta coefficient of .2393 indicates that respondents whose housing was assessed as being of high quality indicated a high level of housing satisfaction. As was mentnioned in the discussion of previous research on housing satisfaction, housing quality was found to be closely associated with a family's income. In this study the correlation between income and housing quality was .31. A family's income determines the amount of improvements it can afford to make on the home and also affects its ability to maintain the home in optimum condition and prevent structural deterioration and decay. Therefore, the significant explaining power of housing quality could be considered an indirect reflection of the family's income. Even though income did not make a significant contribution in the overall model, it may be operating indirectly through the structural quality variable.

The second most influential characteristic was tenure (B=.1082). Those respondents who owned their homes were more satisfied with their housing than those respondents who did not own. Apparently, the cultural sanctions for home ownership still offer enough reward for this characteristic to influence housing satisfaction, despite rising costs. The positive standardized beta coefficient (B=.1082) for age indicates older respondents were more satisfied with their housing than younger respondents. This finding could indicate that the older respondents perceived their housing as having met normative standards, whereas the younger respondents were still in the process of trying to achieve certain standards. Or, this high level of housing satisfaction among older respondents could be attributable to the realization that the

possibility of improving or changing their housing was small, given their age and available income; thus, they had accepted their present housing as being what they needed.

The negative beta coefficient of -.0823 between person-per-room ratio and housing satisfaction indicates that as density increased, housing satisfaction decreased. This is consistent with findings from previous research. Age of respondent's house was related negatively to housing satisfaction (B=-.0587). Housing satisfaction decreased as the age of the structure increased. This finding could be attributable to the structural deterioration sometimes found in older homes.

Length of residence was related positively to housing satisfaction (B=.0787). Housing satisfaction increased as the length of residence increased. This finding could indicate that individuals had remained in their housing for longer periods of time because it was meeting their housing needs. The variable housing cost included the respondents' evaluation of their rent/mortgage payments, maintenance costs, property taxes, and utilities as being low, average, or higher. The negative beta coefficient of -.0521 for housing cost indicates that those individuals who evaluated their overall housing costs as being low indicated higher satisfaction with housing. The positive beta coefficient of .0528 for structure type indicates individuals living in single family detached units were more satisfied with their housing than those living in other structure types. There were no differences between the sample analyzed in this model and the overall sample with regard to socio-demographic and housing characteristics.

Two variables which were significant in explaining housing satisfaction in this study, but not in the Pruitt (1976) study, were housing cost and structure type. The fact that these two variables were significantly related to housing satisfaction of Oklahomans in 1979 but not in 1976 could be reflective of events occurring in the housing market. Apparently, individuals have become more conscious of housing costs and structure type because of the rising cost of renting/buying, and maintaining a home. Families who were fortunate enough to have lower mortgage payments and single family detached units were more satisfied with their housing cost and structure type in a market where housing costs have risen steadily.

The overall increase in housing cost could also be responsible for the increased influence of housing satisfaction on overall satisfaction with quality of life. Individuals could be realizing that being able to obtain the American norm, ownership of a single family detached unit of adequate structural quality, is a goal which is increasingly more difficult to obtain. The achievement of this norm is reflected not only in housing satisfaction, but also in overall satisfaction with quality of life.

The housing questions in these data did not measure whether or not the individuals' housing met their specific normative standards. Therefore, the achievement of normative criteria cannot be analyzed, but is reflected by the housing characteristics found to be significant in explaining housing satisfaction. All of the housing characteristics identified by Morris, Crull, and Winter (1976) as normative components of housing satisfaction were also found to be significantly related to housing satisfaction in this study. It should be recognized

that the relatively low R^2 (.17) indicates that there are other variables not in this model that influence housing satisfaction.

The findings from this research do support findings of previous research. Tenure was found to be related to housing satisfaction by Campbell et al. (1976), Rossi (1955), Speare (1974), Rent and Rent (1978), and Pruitt (1977). The relationship between person-per-room ratio and housing satisfaction has also been found in previous studies (Morris et al., 1976; Speare, 1974; Stewart and McCown, 1977). Housing cost and length of residence were identified as contributors to housing satisfaction in the Rogers and Nikkel (1979) study. Pruitt (1977), in his study of Oklahoma families, found older homes were indicators of housing dissatisfaction. Older respondents were more satisfied with their housing than younger respondents in Campbell et al. (1976). Also, preference for a single family detached unit has been related to housing satisfaction (Morris et al., 1976; Rent and Rent, 1978).

Neighborhood Satisfaction

With the addition of neighborhood satisfaction to the model, the socio-demographic characteristic age of the respondent did not remain in the model. Two housing characteristics, age of structure and structure type, also dropped out of the model.

Table XI shows the regression analysis of housing satisfaction on the housing and socio-demographic characteristics with the addition of neighborhood satisfaction. The addition of neighborhood satisfaction to the model increased the R^2 from .17 to .25.

TABLE XI

MULTIPLE REGRESSION OF HOUSING SATISFACTION ON HOUSING AND SOCIO-DEMOGRAPHIC CHARACTERISTICS AND NEIGHBORHOOD SATISFACTION

	Coefficient	Beta	F Ratio
Neighborhood Satisfaction	.3313	.3148	319.01
Condition of Respondents' House	-.3785	-.2073	132.15
Tenure	.3465	.1026	29.95
Persons-Per-Room	-.4762	-.0925	25.85
Length of Residence	.9516	.9793	17.74
Housing Cost	-.8419	-.0526	9.66
Age of Respondent	--	--	--
Sex of Respondent	--	--	--
Employment	--	--	--
Age of Structure	--	--	--
Race of Respondent	--	--	--
Family Income	--	--	--
Structure Type	--	--	--
Education	--	--	--
Marital Status	--	--	--
Constant 4.72			
	Reduced Model	Full Model	
	R^2 = .25	R^2 = .26	
	F = 150.04	F = 48.80	
	df = 6 and 2,605	df = 15 and 2,084	
	$p \leq .05$	$p \leq .05$	
	n = 2611	n = 2099	

Neighborhood satisfaction had the strongest relationship with housing satisfaction (B=.3148). As satisfaction with neighborhood increased, it was accompanied by an increase in satisfaction with housing. Families apparently did evaluate their housing on not only characteristics of the structure, but also on the characteristics of the surrounding environment. The contributions of condition of respondents' house, tenure, persons-per-room, length of residence, and housing cost still remained significant in explaining the variance in housing satisfaction.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was two-fold in nature: (1) to investigate the relative importance of satisfaction with various life domains in explaining overall satisfaction with quality of life, and (2) an in-depth analysis of factors relating to housing satisfaction. The sample was a proportional, stratified, random sample of the state of Oklahoma. Two thousand seven hundred and thirty-four individuals responded. Data were collected by personal interview. Stepwise multiple linear regression was the statistical tool utilized in analyzing the data.

The theoretical base for this study closely paralleled previous studies (Campbell, Converse, and Rodgers, 1976; Andrews, 1974). Overall life satisfaction was perceived to be dependent on an individual's attitudes about some or all of the domains under investigation. Life satisfaction was essentially considered to be a cognitive assessment of one's progress towards desired goals. The nearer individuals are to attaining their desired goal or normative state for the domains under investigation, the greater would be their satisfaction with life in general. The theory utilized in explaining housing satisfaction was similar to the theory of overall life satisfaction. It was theorized that families are continuously evaluating their housing in relation to cultural norms (Morris and Winter, 1975). Housing satisfaction

was theorized to be greater if the housing met cultural housing norms: tenure, quality, space, and neighborhood.

In the quality of life analysis, eight of the 13 domains explained 32 percent of the variance in overall life satisfaction. Contributions of domain satisfactions in order of highest to lowest explaining power were: spare time, health, family life, friendships, standard of living, amount of education received, house/apartment, and savings and investments. As satisfaction with a particular domain increased, it was accompanied by an increase in satisfaction with life quality. Satisfaction with neighborhood, city/county, life in the United States and in Oklahoma, and occupation did not make significant contributions to satisfaction with overall quality of life.

The relationship between socio-demographic characteristics of respondents and overall life satisfaction was also analyzed. Only five percent of the variance in overall life satisfaction was explained by age of respondent, marital status, level of education, and income. As levels of education, income, and age increased, life satisfaction also increased. Married respondents were more satisfied with life quality than non-married respondents.

Seventeen percent of the variance in housing satisfaction was explained by seven of the housing characteristics and one of the socio-demographic characteristics. Contributions in order of highest to lowest explaining power included: (1) high structural quality; (2) owners vs. renters; (3) older vs. younger respondents; (4) low person-per-room ratio; (5) longer length of residency; (6) newer homes; (7) low housing costs; and (8) single family detached unit. Race,

sex, income, employment, education, and marital status of respondent did not make significant contributions to housing satisfaction.

Neighborhood satisfaction was added to the housing satisfaction model because it had been found to be a significant variable in previous research in housing satisfaction. The inclusion of neighborhood satisfaction in the model increased the R^2 from .17 to .25. Of all the variables, neighborhood satisfaction was the strongest contributor to housing satisfaction.

Findings from this research were then compared with results of previous studies to identify the changes that had occurred in characteristics which contributed to overall life satisfaction and housing satisfaction.

Conclusions

Acknowledging the limitations of the study, certain conclusions can be drawn. The purposes of this study were: (1) to analyze the relationship between satisfaction with 13 life domains and overall life satisfaction, and (2) to analyze in-depth one specific domain, housing. Housing satisfaction is significantly related to overall satisfaction with quality of life. As a family's satisfaction with its housing increases, its satisfaction with quality of life increases. The eight domains significantly related with quality of life are characteristically different from those not so related. The related domains are more person-oriented; whereas, the nonrelated domains are more location-oriented. Public policy and programs that are addressing quality of life should be structured around the more personal domains such as spare time, health, family, and friendships. The

city/county/state (Oklahoma), or country (United States) in which individuals live were not found to be as important as the more person-oriented domains.

Three housing characteristics strongly related to housing satisfaction are neighborhood satisfaction, structural quality, and tenure. As a family's satisfaction with its neighborhood increases, its housing satisfaction increases. Urban planners and housing specialists need to view housing developments in a perspective which includes the surrounding neighborhood.

High structural quality is associated with housing satisfaction. Policies/programs which would assist families in maintaining or improving the structural quality of their homes would be beneficial. Home repair and maintenance techniques could be taught through community classes and county extension programs. Sweat equity programs could offer subsidies as incentives for low income families to become involved in improving the structural qualities of their homes.

Homowners express higher levels of housing satisfaction in comparison to renters. Innovative mortgage programs would enable more individuals to have the opportunity to purchase a home. Home mortgage agencies need to be encouraged to develop alternative forms of financing; in order that individuals can still purchase a home despite an economic climate that demands high interest rates.

The findings and conclusions drawn from this study should be interpreted and applied with caution. This study and other quantitative studies (Pruitt, 1977) only identify significant domains or characteristics that were related to quality of life and housing satisfaction. One does not know how or why these are related. A qualitiative study

could follow research such as this, and offer more insight into how and why these domains and characteristics are important. This broader base of understanding could result in more effective policy/programs in improving satisfaction with housing and quality of life.

Recommendations for Future Study

The following are suggestions for future research that will expand the existing knowledge of the concept of overall satisfaction with quality of life and housing satisfaction:

1. The value of replication of studies has been discussed in the conclusions section. Continuation of replication of studies can serve as monitors of constancy or change in people's perceptions of overall life satisfaction.

2. Overall satisfaction with quality of life could also be studied qualitatively. Less identification of variables prior to the collection of information would allow the respondents more freedom to discuss aspects of their lives which contribute to overall life satisfaction and how these contributions are made.

3. In the limitations section, two social psychological approaches to understanding housing satisfaction were identified. Research has been done based on the theory that a house is a reflection of the resident and related to his/her sense of self (Cooper, 1974). Observations and interviews could be a method of determining if the respondent feels the house is a reflection of them and if this is a contributor to satisfaction with the house. An additional social psychological approach could incorporate the theory of dramaturgical analysis. The basis of dramaturgy is that the portrayal of self is a social production

(Goffman, 1959). Everyday routines are viewed as being social performances. The adequacy of appearance, stage (background), and sincerity are the determining factors in a successful performance. An individual's house could be considered a stage for social performances. Decor and accessories could be props which aid in the success of certain performances. Research which investigates the significance of houses as social settings for performances could be useful in expanding the understanding of the concept of housing satisfaction. If an individual's house allows him/her to act in a desired manner, it may influence housing satisfaction as well as overall life satisfaction.

A SELECTED BIBLIOGRAPHY

Aberbach, J. and Walker, J. Race in the City: Political Trust and Public Policy in the New Urban System. Boston: Little, Brown, 1973.

Agan, T. and Luchsinger, E. The House: Principles/Resources/Dynamics. Philadelphia: Lippincott Co., 1965.

Allport, F. H. and Vernon, P. E. A Study of Values. Boston: Houghton Mifflin, 1931.

American Public Health Association. Planning the Home for Occupancy. Chicago: Public Administration Service, 1950.

Andrews, F. M. Developing measures of perceived quality: results from several national surveys. Social Indicators Research, 1974, 1, 1-26.

Bachman, J. G., Kahn, R. L., Mednick, M. T., Davidson, T. N., and Johnston, L. D. Youth in Transition. Ann Arbor, Michigan: Institute for Social Research, 1, 1967.

Blumenthal, M. D., Kahn, R. L., Andrews, F. M., and Head, K. B. Justifying Violence: Attitudes of American Men. Ann Arbor, Michigan: Institute for Social Research, 1972.

Bradburn, N. M. and Caplovitz, D. Reports on Happiness. Chicago: Aldine, 1965.

Campbell, A., Converse, P. E., and Rodgers, W. L. The Quality of American Life. New York: Russell Sage Foundation, 1976.

Cantril, H. The Pattern of Human Concerns. New Brunswick, N.J.: Rutgers University Press, 1965.

Chevan, A. Family growth, household density, and moving. Demography, 1971, 8, 451-458.

Cooper, C. The house as a symbol of the self. In J. Lang, C. Burnette, W. Moleski, and D. Vachon (Eds.), Designing for Human Behavior. Philadelphia: Dowden, Hutchinson and Ross, 1974.

Dodd, S. C. On classifying human values: a step in the prediction of human valuing. American Sociological Review, 1951, 16, 645-653.

Fried, M. and Gleicher, P. Some sources of residential satisfaction in an urban slum. Journal of American Institute of Planners, 1961, 27, 305-315.

Gans, H. J. The Urban Villagers. New York: Free Press, 1962.

Gans, H. J. The Levittowners. New York: Random House, 1967.

Gans, H. J. People and Plans. New York: Basic Books, 1968.

Goffman, E. The Presentation of Self in Everyday Life. New York: Doubleday, 1959.

Gurin, G., Veroff, J., and Feld, S. Americans View Their Mental Health. New York: Basic Books, 1969.

Hartman, C. W. Housing and Social Policy. Englewood Cliffs, N.J.: Prentice Hall, 1975.

Hinshaw, M. and Allott, K. Environmental preferences of future housing consumers. Journal of the American Institute of Planners, 1972, 38, 102-107.

Inman, J. Family social climate and attitudes toward living space in four stages of family life cycle. Housing and Society, 1978, 5, 74-75.

Keller, S. The Urban Neighborhood. New York: Random House, 1968.

Kluckhorn, F. R. American women and American values. In L. Bryson (Ed.)., Facing the Future's Risks. New York: Harper, 1953.

Lamanna, R. Value consensus among urban residents. Journal of the American Institute of Planners, 1964, 30, 317-323.

Lansing, J. B., Withey, S. B., and Wolfe, A. C. Working Papers on Survey Research in Poverty Areas. Ann Arbor, Michigan: Institute for Social Research, 1971.

Laumann, E. and House, J. Living room styles and social attitudes: patterning of material artifacts in an urban community. In E. Laumann, E. Siegel, and P. Hodges (Eds.), The Logic of Social Hierarchies. Chicago: Markham, 1972.

Lepley, R. (Ed.). The Language of Value. New York: Columbia University Press, 1957.

Long, L. H. The influence of number and age of children on residential mobility. Demography, 1972, 9, 371-382.

Marans, R. W. and Rodgers, W. Toward an understanding of community satisfaction. In A. W. Hawley and V. P. Rock (Eds.), Metropolitan American in Contemporary Perspective. New York: John Wiley and Sons, 1975.

Meeks, C. B., Merchant, M., and Bernard, C. W. Residential satisfaction of recent movers into government assisted housing projects: the impact of the first nine months. Housing Educators Journal, 1977, 4, 2-13.

Michaelson, W. An empirical analysis of urban environmental preferences. Journal of American Institute of Planners, 1966, 32, 355-360.

Morris, C. and Jones, L. V. Value scales and dimensions. Journal of Abnormal Social Psychology, 1955, 51, 523-535.

Morris, E. W., Crull, S. R., and Winter, M. Housing norms, housing satisfaction and the propensity to move. Journal of Marriage and the Family, 1976, 309-320.

Morris, E. W. and Winter, M. A theory of housing satisfaction. Journal of Marriage and the Family, 1975, 79-88.

Muller, J. H., Schuessler, K. F., and Costner, H. L. Statistical Reasoning in Sociology. Boston: Houghton Mifflin, 1977.

Nie, N. H., Hull, H. C., Jenkins, J. G., Steinbrenner, K., and Bent, D. H. Statistical Package for the Social Sciences. New York: McGraw-Hill, 1970.

Onibokun, A. Evaluating consumers' satisfaction with housing: an application of a systems approach. Journal of American Institute of Planners, 1974, 4, 189-200.

Onibokun, A. Social system correlates of residential satisfaction. Environment and Behavior, 1976, 8, 323-345.

Perry, C. A. Housing for the Machine Age. New York: Russell Sage Foundation, 1939.

Pruitt, L. K. The influence of residential domain satisfactions and life domain satisfactions on overall satisfaction with quality of life. Proceedings of the Environmental Design Research Association, 1977, 224-238.

Rainwater, L. Fear and the house-as-haven in the lower class. Journal of American Institute of Planners, 1966, 32, 23-30.

Reardon, L. C. and Boles, W. E. Housing opportunity, quality and satisfaction for single person households: a comparative study. Housing and Society, 1978, 8, 60-62.

Rent, G. S. and Rent, C. Low-income housing factors related to residential satisfaction. Environment and Behavior, 1978, 10, 459-489.

Riemer, S. Sociological theory of home adjustment. American Sociological Review, 1943, 8, 272-278.

Riemer, S. Maladjustment to the family home. American Sociological Review, 1945, 10, 642-648.

Riemer, S. Sociological perspectives in home planning. American Sociological Review, 1947, 12, 155-159.

Rogers, E. C. and Nikkel, S. R. The housing satisfaction of large urban families. Housing and Society, 1979, 6, 73-87.

Rokeach, M. The Nature of Human Values. New York: Free Press, 1973.

Rossi, P. H. Why Families Move. Glencoe, Ill.: The Free Press, 1955.

Sabaugh, G., Van Arsdol, M. D., and Butler, E. W. Some determinants of intrametropolitan residential mobility: conceptual considerations. Social Forces, 1969, 48, 88-98.

Schmandt, H. J. and Bloomberg, W. The Quality of Urban Life. Beverly Hills, Calif.: Sage Publications, 1969.

Smith, R. H., Kivlin, L. D., and Sinden, C. P. Housing Choices as Evidenced by Residential Mobility, Research Publication No. 204. University Park: The Pennsylvania State University College of Home Economics, 1963.

Speare, A. Home ownership, life cycle stage, and residential mobility. Demography, 1970, 7, 449-458.

Speare, A. Residential satisfaction as an intervening variable in residential mobility. Demography, 1974, 11, 173-178.

Stewart, K. K. and McCown, C. Determinants of housing satisfaction in rural low-income families. Housing Educators Journal, 1977, 4, 33-39.

Survey Research Center, University of Michigan. Survey of Working Conditions, 1969. Washington, D.C.: U.S. Government Printing Office, No. 2916-0001, 1971.

Tucker, M. E. Selected socio-economic characteristics related to housing satisfactions of the aged in the model city area. Unpublished Master's Thesis, Iowa State University, 1969.

Urban Land Institute. The Community Builders' Handbook. Washington, D.C.: U.S. Government Printing Office, 1960.

White, R. K. Value analysis: a quantitative method for describing qualitative data. Journal of Social Psychology, 1944, 19, 351-358.

Wirth, L. Housing as a field of sociological research. American Sociological Review, 1947, 11, 49-52.

Yearns, M. H. Housing satisfaction associated with patterns of living in rural communities of southwestern Iowa. Unpublished Master's Thesis, Iowa State University, 1972.

APPENDIXES

APPENDIX A

FORMAT IN WHICH QUESTIONS APPEARED IN THE INTERVIEW SCHEDULE

Socio-Demographic Characteristics

Education

What was the highest grade of school you completed?

Employment

Now I would like to ask you about your work.

Are you mainly working, a homemaker, not working, retired, a student, or what?

Working

Homemaker

Not working

Unemployed (seeking work)

Retired or disabled, now working

Retired, working

Student, not working

Student, working

Other

Family Income

In this survey of families all over the state, we are trying to get a clear picture of people's financial situations. Taking into consideration all sources of income, what was your total family income before taxes in 1978? Just give me the letter on the card. (Circle the number.)

01	Nothing, or loss	15	$18,000 - $19,999
02	$1 - $1,999	16	$20,000 - $22,999
03	$2,000 - $2,999	17	$23,000 - $25,999
04	$3,000 - $3,999	18	$26,000 - $29,999
05	$4,000 - $4,999	19	$30,000 - $34,999
06	$5,000 - $5,999	20	$35,000 - $39,999
07	$6,000 - $6,999	21	$40,000 - $44,999
08	$7,000 - $7,999	22	$45,000 - $49,999
09	$8,000 - $8,999	23	$50,000 - $56,999
10	$9,000 - $9,999	24	$57,000 - $63,999
11	$10,000 - $11,999	25	$64,000 - $79,999
12	$12,000 - $13,999	26	$80,000 and over
13	$14,000 - $15,999	98	Refused
14	$16,000 - $17,999	99	Don's Know

Marital Status

What is your marital status?

Married
Living Together
Widowed
Divorced
Separated
Never Married

Age

Age of Respondent _____

Sex of Respondent

Male ___
Female ___

Race of Respondent

White
Black
Hispanic
American Indian or Alaskan Native
Asian or Pacific Islander

Housing Characteristics

Structural Quality

How well kept is the respondent's structure?

1 Very Well Kept
2 Mixed - Could Use a Paint Job
3 Poorly - Needs Painting and Minor Repairs
4 Very Poorly - Dilapidated

Tenure

B-28. Do you OWN this (house/apartment), pay rent, or what?

1 Owns or is Buying
2 Pays Rent
3 Provided With Employment
4 Owned by Friend or Relative
5 Other _____

Length of Residency

How long have you lived in this (house/apartment)?

___ One Year or Less
___ (Years)

Housing Cost

Thinking of the costs of this (house/apartment)--such as the rent and the utilities, if those are not included in the rent, are the costs very low, low, average, high, or very high?

Thinking of the costs of this (house/apartment)--such as the mortgage payments, the maintenance costs, property taxes, and utilities, are the costs very low, low, average, high, or very high?

1 Very Low
2 Low
3 Average
4 High
5 Very High
6 Don't Know

Persons-Per-Room

Now I have some questions about your (house/apartment). How many rooms do you have here (for you and your family), not counting hallways and bathrooms? (Count rooms in basement, attic, or garage only if finished and furnished.)

Total number in household? _____

Age of Structure

Does the respondent's structure seem to be:

___ Less than 5 years old? ___ 5-25 years old?
___ More than 25 years old?

Structure Type

Type of structure in which family lives:

Mobile Home
Detached Single Family House
2-Family House, 2 Units Side by Side
2-Family House, 2 Units One Above the Other
Detached 3-4 Family House
Row House (3 or More Units in an Attached Row)
Apartment House (5 or More Units, 3 Stories or Less)
Apartment House (5 or More Units, 4 Stories or Less)
Apartment in a Partly Commercial Structure
Garage Apartment
Other _____

The following questions were measured on a 1-7 point Likert scale with 1=completely satisfied, 4=neutral, and 7=completely dissatisfied.

All things considered, how useful do you think your education is for you personally? Which number comes closest to how satisfied or dissatisfied you feel?

All things considered, how satisfied are you with your friendships, with the time you can spend with friends, the things you do together, the number of friends you have, as well as the particular people who are your friends? Which number comes closest to how you feel?

All things considered, how satisfied or dissatisfied are you with this neighborhood as a place to live?

Overall, how satisfied are you with the ways you spend your spare time? Which number comes closest to how satisfied or dissatisfied you feel?

How satisfied are you with your family's situation so far as savings and investments are concerned?

The things people have--housing, car, furniture, recreation, and the like--make up their standard of living. Some people are satisfied with their standard of living, others feel it is hot as high as they would like. How satisfied are you with your standard of living? Which number comes closest to how you feel?

All things considered, how satisfied are you with your job? Which number comes closest to how satisfied or dissatisfied you feel?

All things considered, how satisfied are you with your family life, the time you spend and the things you do with the members of your family? Which number comes closest to how you feel?

All things considered, how satisfied are you with life in Oklahoma today? Which number comes closest to how satisfied or dissatisfied you feel?

All things considered, how satisfied are you with life in the United States today? Which number comes closest to how satisfied you feel?

Of course, most people get sick now and then, but, overall, how satisfied are you with your own health? Which number comes closest to how you feel?

Considering all the things we have talked about, how satisfied or dissatisfied are you with this (house/apartment)? Which number comes closest to how satisfied or dissatisfied you feel?

Here is a card that I want you to use to tell me how satisfied you are with the city/county as a place to live. If you are completely satisfied, you would say "one." If you are completely dissatisfied you, would say "seven." If you are neither completely satisfied nor completely dissatisfied, you would give me a number between two and six. How satisfied are you with the city/county as a place to live?

We have talked about various parts of your life; now I want to ask you about your life as a whole. How satisfied are you with your life as a whole these days? Which number comes closest to how satisfied or dissatisfied you are with your life as a whole?

Ten Bipolar Adjectives

Here are some words and phrases which we would like you to use to describe how you feel about your present life. For example, if you think your present life is very "boring," circle the 1 next to the word "boring." If you think it is very "interesting," circle the 7 next to the word "interesting." If you think it is somewhere between, circle the number that comes closest to how you feel.

D-135.	BORING	1	2	3	4	5	6	7	INTERESTING
D-136.	ENJOYABLE	1	2	3	4	5	6	7	MISERABLE
D-137.	EASY	1	2	3	4	5	6	7	HARD
D-138.	USELESS	1	2	3	4	5	6	7	WORTHWHILE
D-139.	FRIENDLY	1	2	3	4	5	6	7	LONELY
D-140.	FULL	1	2	3	4	5	6	7	EMPTY

D-141.	DISCOURAGING	1	2	3	4	5	6	7	HOPEFUL
D-142.	TIED DOWN	1	2	3	4	5	6	7	FREE
D-143.	DISAPPOINTING	1	2	3	4	5	6	7	REWARDING
D-144.	BRINGS OUT THE BEST IN ME	1	2	3	4	5	6	7	DOESN'T GIVE ME MUCH CHANCE

APPENDIX B

CHARACTERISTICS OF RESPONDENTS IN REGRESSION MODELS

TABLE XII

SOCIO-DEMOGRAPHIC AND HOUSING CHARACTERISTICS OF RESPONDENTS INCLUDED IN REGRESSION OF OVERALL SATISFACTION WITH QUALITY OF LIFE ON SIGNIFICANT LIFE DOMAINS (n=2509)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Age			47	25	18-98
Sex					
Male	1008	46			
Female	1173	54			
Race					
White	1920	88			
Non-White	261	12			
Marital Status					
Married	1519	70			
Not Married	662	30			
Occupation					
Working	877	40			
Not Working	1304	60			
Income			11,580	10,000-11,999	$1-$80,000 & over
Structural Quality					
Very Well Kept	1341	62			
Mixed--Needs Painting	591	27			
Poorly Kept (Painting & Minor Repairs)	175	8			
Very Poorly (Dilapidated)	73	3			
Person-Per-Room Ratio			.53	.50	0-2
Tenure					
Own	1648	76			
Rent	523	24			

TABLE XII (Continued)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Age of Structure					
< 5	244	11			
5-25	1110	51			
> 25	826	38			
Length of Residency (in years)			10	1	1-78
Housing Cost					
Very Low	113	5			
Low	336	16			
Average	1151	54			
High	393	19			
Very High	131	6			

TABLE XIII

SOCIO-DEMOGRAPHIC CHARACTERISTICS AND LIFE DOMAINS RESPONSES OF RESPONDENTS INCLUDED IN REGRESSION OF OVERALL SATISFACTION WITH QUALITY OF LIFE ON SOCIO-DEMOGRAPHIC CHARACTERISTICS (n=2181)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Age			51	25	18-98
Sex					
Male	1102	44			
Female	1408	56			
Race					
White	2227	89			
Non-White	275	11			
Income					
			11.74	13	$10,000-$11,999 $14,000-$15,999
Occupation					
Working	954	38			
Not Working	1556	62			
Marital Status					
Married					
Not Married					
Spare Time					
Completely Satisfied	1000	40			
	565	22			
	366	15			
Neutral	340	13			
	119	5			
	64	3			
Completely Dissatisfied	55	2			

TABLE XIII (Continued)

Characteristic	Freq.	%	$\overline{X}$	Mode	Range
Health					
Completely Satisfied	1032	41			
	603	24			
	287	11			
Neutral	277	11			
	145	6			
	68	3			
Completely Dissatisfied	98	4			
Family Life					
Completely Satisfied	1326	52			
	626	25			
	243	10			
Neutral	174	7			
	60	3			
	39	2			
Completely Dissatisfied	21	1			
Friendships					
Completely Satisfied	1384	55			
	501	20			
	258	10			
Neutral	246	10			
	71	3			
	28	1			
Completely Dissatisfied	22	1			

TABLE XIII (Continued)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Standard of Living					
Completely Satisfied	1056	42			
	497	20			
	343	14			
Neutral	339	13			
	156	6			
	52	2			
Completely Dissatisfied	67	3			
Amount of Education Received					
Completely Satisfied	820	33			
	374	15			
	297	12			
Neutral	476	19			
	222	9			
	136	5			
Completely Dissatisfied	185	7			
House/Apartment					
Completely Satisfied	1439	57			
	492	20			
	201	8			
Neutral	223	9			
	64	3			
	35	1			
Completely Dissatisfied	56	2			

TABLE XIII (Continued)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Savings/Investments					
Completely Satisfied	717	29			
	337	13			
	273	10			
Neutral	428	17			
	222	9			
	160	7			
Completely Dissatisfied	373	15			
Neighborhood					
Completely Satisfied	1575	63			
	427	17			
	179	7			
Neutral	201	8			
	54	2			
	23	1			
Completely Dissatisfied	46	2			
City/County					
Completely Satisfied	1300	52			
	426	17			
	296	12			
Neutral	327	13			
	75	3			
	35	1			
Completely Dissatisfied	50	2			

TABLE XIII (Continued)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Life in U.S.					
Completely Satisfied	1212	48			
	524	21			
	311	12			
Neutral	292	12			
	97	4			
	33	1			
Completely Dissatisfied	40	2			
Life in Oklahoma					
Completely Satisfied	1094	44			
	675	27			
	333	13			
Neutral	311	12			
	57	2			
	22	1			
Completely Dissatisfied	16	1			
Occupation					
Completely Satisfied					
Neutral					
Completely Dissatisfied					
Overall Satisfaction With Quality of Life			45	56	9-63

TABLE XIV

SOCIO-DEOMGRAPHIC AND HOUSING CHARACTERISTICS OF RESPONDENTS INCLUDED IN REGRESSION OF HOUSING SATISFACTION ON HOUSING AND SOCIO-DEMOGRAPHIC CHARACTERISTICS (n=2613)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Age			49	25	18-98
Sex					
Male	1164	45			
Female	1449	55			
Race					
White	2302	88			
Non-White	303	12			
Marital Status					
Married	1813	69			
Not Married	798	31			
Occupation					
Working	968	37			
Not Working	1645	63			
Income			$13, $13,700	$12,000- 13,999	$1-$30,000 & over
Structural Quality					
Very Well Kept	1612	62			
Mixed	703	27			
Poor	218	8			
Very Poor	80	3			
Persons-Per-Room			.51	.50	0-2
Tenure					
Own	2018	77			
Other	595	23			
Age of Structure					
< 5	272	10			
5-25	1314	50			
> 25	1027	40			

TABLE XIV (Continued)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Length of Residency			10	1	1-78
Housing Cost					
Very Low	128	5			
Low	392	15			
Average	1423	54			
High	512	20			
Very High	158	6			
Structure Type					
Single Detached	2210	85			
Other	403	15			
Housing Satisfaction					
Completely Satisfied	1476	56			
	522	20			
	222	9			
Neutral	230	9			
	71	3			
	36	1			
Completely Dissatisfied	56	2			
Structural Quality					
Very Well Kept	1612	62			
Mixed--Needs Painting	702	27			
Poorly Kept (Painting & Minor Repairs)	218	8			
Very Poorly (Dilapidated)	80	3			

TABLE XIV (Continued)

Characteristic	Freq.	%	$\bar{X}$	Mode	Range
Persons-Per-Room Ratio			.51	.50	0-2
Tenure					
Own	2019	77			
Other	593	23			
Age of Structure					
< 5	271	10			
5-25	1313	50			
> 25	1026	40			
Length of Residency			10	1	1-78
Housing Cost					
Very Low	128	5			
Low	393	15			
Average	1423	54			
High	510	20			
Very High	158	6			
Type of Structure					
Detached Unit	2208	85			
Other	402	15			
Neighborhood Sat.					
Completely Satisfied	1614	62			
	459	17			
	200	8			
Neutral	204	8			
	60	2			
	27	1			
Completely Dissatisfied	48	2			

TABLE XIV (Continued)

Characteristics	Freq.	%	$\overline{X}$	Mode	Range
Housing Satisfaction					
Completely Satisfied	1474	56			
	523	20			
	222	9			
Neutral	230	9			
	71	3			
	36	1			
Completely Dissatisfied	56	2			

VITA[2]

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